

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matters of)	
)	
Deployment of Wireline Services Offering)	CC Docket No. 98-147
Advanced Telecommunications Capability)	
)	
and)	
)	
Implementation of the Local Competition)	CC Docket No. 96-98
Provisions of the)	
Telecommunications Act of 1996)	

**COMMENTS OF
CORECOMM, INC ., VITTS NETWORKS, INC., AND LOGIX, INC.**

Eric Branfman
Kevin Hawley
Swidler Berlin Shereff Friedman, LLP
3000 K Street, N.W.
Suite 300
Washington, D.C. 20007
(202) 424-7500

Counsel for **CoreComm, Inc., Vits
Networks, Inc., and Logix, Inc.**

Dated: October 12, 2000

TABLE OF CONTENTS

ARGUMENT.....	1
I. THE FCC SHOULD BROADLY DEFINE THE STATUTORY OBLIGATION OF INCUMBENT LECs TO PROVIDE COLLOCATION “NECESSARY” FOR INTERCONNECTION OR ACCESS TO UNBUNDLED ELEMENTS.....	2
A. The Commission Should Adopt A Broad Definition Of “Necessary” That Advances The Procompetitive Principles That Animate The Act.	5
B. The Commission May Require Physical Collocation That Facilitates The Statutory Obligation Of Incumbent LECs To Provide Interconnection And Access To Network Elements On “Just and Reasonable” and “Nondiscriminatory” Terms and Conditions.	12
II. THE COMMISSION SHOULD REESTABLISH AND STRENGTHEN RULES GOVERNING COLLOCATION IN ILEC CENTRAL OFFICES.	19
A. The Commission Should Require Incumbent LECs to Allow Collocation Of All Equipment That Facilitates Interconnection Or Network Access On Terms That Are Just And Reasonable And Non Discriminatory.	19
B. CLECs Should Be Allowed To Collocate All Equipment That Facilitates Interconnection or Network Access, Regardless Of Its Functionality.	20
C. The Commission Should Find Multifunction Equipment To Be Eligible For Central Office Collocation.....	27
D. ILECs Must Be Required to Permit CLECs to Self-Provision Cross-Connection Between Collocators in ILEC Central Offices	29
E. The Commission Should Reestablish Reasonable Terms And Conditions To Facilitate Use of Collocation Space.	30
F. The Commission Should Establish Minimum Provisioning Intervals for the Full Range of Collocation Arrangements.....	32
III. COLLOCATION AT REMOTE TERMINALS.....	35
A. Collocation At Remote Terminals of Line Cards, DSLAMS, and other Equipment Is Necessary for Interconnection and Access to UNEs.....	35
B. ILECs Must Have An Absolute Obligation to Provide Sufficient Collocation Space at Remote Terminals.	37
C. Disclosure of Remote Terminal Information Should be Required.	39
D. ILECs Should Be Required to Deploy Remote Terminals That Support Interconnection By CLECs.....	40

**Corecomm, Inc., Votts Networks, Inc.
and Logix, Inc.
Docket Nos. 98-147 and 96-98
10/12/00**

IV. THE COMMISSION’S LOCAL COMPETITION RULES SHOULD ACCOMMODATE NEXT GENERATION NETWORK ARCHITECTURES.	40
A. Project Pronto and Richardson, Texas Demonstrate the Need For New Local Competition Rules to Govern ILEC Deployment of Next Generation Network Architectures 41	
B. The Commission Should Redefine Loop and Transport UNEs to Include Advanced Services Electronics.....	42
1. Line Cards.....	43
2. OCDs	44
C. CLECS Must Be Permitted to Deploy Their Own Line Cards.....	45
D. The Commission Should Designate New UNEs.	47
1. DWDM Wavelengths	47
2. Constant Bit Rate Class of Service.....	48
3. The Broadband UNE	49
E. ILECs Should Be Required to Disclose Fiber Deployment Plans and the Full Technical Capabilities Next Generation Network Architectures	50
V. COPPER LOOPS MUST BE MAINTAINED	51
VI. THE COMMISSION SHOULD MODIFY ITS COLLOCATION RULES TO FACILITATE LINE SHARING AND LINE SPLITTING.	53
A. Splitter Collocation	53
B. Multi-functional Equipment	55
C. Location of Equipment.....	56
D. Provisioning Intervals for Collocation Augments for Line Sharing	58
E. The Commission Should Require Incumbent LECs to Allow Line Splitting.	59
VII. THE COMMISSION SHOULD IMPLEMENT A NATIONAL SPACE RESERVATION POLICY FOR BOTH CENTRAL OFFICE AND REMOTE TERMINAL COLLOCATION.....	61
A. The Need for a National Standard.....	61
B. A National Standard is Feasible.....	62
C. A Move from Space Reservation to Space Enhancement.....	63
CONCLUSION.....	66

SUMMARY

This proceeding gives the Commission an opportunity to further advance the pro-competitive goals of the Telecommunications Act of 1996, by adopting comprehensive regulations governing physical collocation and expanding the definition of UNEs to embrace advanced services equipment and functionalities. The ultimate objective of Congress in adopting the Act was competitive parity, reflected in the comprehensive common carrier obligation imposed on incumbent LECs to provide interconnection, access to network elements and physical collocation to its competitors. To hasten progress toward this objective in a rapidly changing telecommunications industry, the Commission should adopt regulations broadly requiring: (1) collocation of all CLEC equipment -- on reasonable and nondiscriminatory terms and conditions -- that serves to facilitate interconnection and network access at least equal in quality to that incumbent LECs provide to themselves; and (2) access to advanced services functionalities of loop, subloop, and transport UNEs.

Despite this Commission's diligent efforts, achieving workable competition in the local exchange telecommunications service market has proved elusive. For just as the profitability of advanced telecommunications services has emboldened incumbent LECs to interpose arbitrary restrictions on physical collocation in central offices, remote terminals and other physical gateways, incumbent LECs have also been successful in securing judicial relief from the FCC's relatively modest attempts to eliminate such competitive barriers. The Commission should step into this stalemate with all of its remedial authority. It should respond to the court's decision in

**Corecomm, Inc., Vitis Networks, Inc.
and Logix, Inc.
Docket Nos. 98-147 and 96-98
10/12/00**

GTE Service Corp v. FCC, 205 F.3d 416 (D.C. Cir. 2000) as an invitation to broadly interpret its statutory authority over collocation, establishing a comprehensive factual and legal framework for imposing a full set of collocation obligations on incumbent LECs. In doing so, the FCC should take affirmative steps to eliminate the incumbent's inherited monopoly advantage by mandating comprehensive competitive to incumbent facilities – encouraging the emergence of a dynamic market for local exchange services, provided by a numerous competing carriers, with widely varying competitive offerings – using the incumbent network as a platform. Section 251(c)(6) of the Act -- which obligates incumbent LECs to “provide on terms and conditions that are just and reasonable, and nondiscriminatory, for physical collocation of equipment necessary for interconnection or access to unbundled elements” (47 U.S.C. § 251(c)(6)) -- mandates no less.

It is critical that the Commission provide a comprehensive justification for taking broad steps that are coextensive with its manifest statutory authority. For the court in *GTE Service* did *not* foreclose the Commission from permitting CLECs to collocate a full range of contemporary telecommunications equipment on ILEC premises, be it multifunctional equipment or cross-connections among CLECs. The court merely sought a *limiting standard* for distinguishing the equipment deemed “necessary.” Congress clearly used the word “necessary” in its ordinary legal sense – *i.e.*, to enable, facilitate or promote – delegating to the Commission interpretive authority to designate equipment eligible for collocation as “necessary” to achieve the procompetitive goals of the Act and the evolving nature of the industry. As it appears in Section 251(c)(6), the term “necessary” is clearly intended to distinguish collocation associated with “interconnection and access to unbundled elements” (*id.*), thus incorporating the obligation of incumbent LECs to

provide interconnection and access to UNEs under Section 251(c)(2)-(3). This obligation includes, among other things, the duty to provide interconnection “at least equal in quality to that provided by the local exchange carrier to itself or to any subsidiary [or] affiliate,” and both interconnection and access to network elements on just and reasonable and nondiscriminatory terms and conditions. *See* 47 U.S.C. § 251(c)(2)-(3).

This statutory scheme calls for regulations that allow CLECs to collocate any equipment that: (i) is used by the incumbent LEC to provide interconnection or network access to *itself* or an affiliate; or (ii) facilitates interconnection or access to UNEs necessary for CLECs to provide competitive telecommunications service, on terms and conditions that are “just and reasonable” and “nondiscriminatory.” Such regulations will obviate arguments over physical features and functionalities of equipment, creating a flexible standard that accommodates evolving telecommunications technology and the interest of consumers in competitive service, thereby allowing collocation of advanced services equipment such as ATM multiplexers and routers. For the same reasons, the Commission should reestablish the requirement that ILECs permit CLECs to perform their own cross-connects with other CLECs on ILEC premises. Nowhere does Section 251(c)(6) limit collocation to that which is “necessary” to provide “interconnection” *with the incumbent LEC*. Moreover, to the extent that the incumbent LEC cross connects with itself or other CLECs, it must allow all CLECs to use their collocation space to cross connect with each other. The Commission should also adopt regulations allowing for the collocation at remote terminals, collocation necessary to provide line sharing, and nationwide guidelines for provisioning intervals involved with collocation.

**Corecomm, Inc., Votts Networks, Inc.
and Logix, Inc.
Docket Nos. 98-147 and 96-98
10/12/00**

This proceeding also presents an important opportunity for the Commission to introduce competition over the next generation network architectures currently being deployed by incumbent LECs. The Commission should take several steps in this regard. First, the Commission should clarify that loop and transport facilities include advanced services equipment. The Commission should make clear that an ILEC's obligation to offer all of the features, functions, and capabilities of the network as UNEs applies to new optical loops and network facilities, including, for example, optical wavelengths and virtual paths between the central office and the customer's premises, and as subloop elements. Second, incumbent LECs should be required to keep CLECs fully apprised of the network capabilities of newly deployed equipment. CLECs are currently at a disadvantage in identifying potential new UNEs because ILECs are not fully disclosing the capabilities associated with network upgrades, including any manufacturer proprietary information, subject to any necessary non-disclosure agreements. Finally, the Commission should also require ILECs to maintain, and offer as UNEs, copper loops as a safeguard to assure that CLECs may provide the current full range of advanced services.

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matters of)	
)	
Deployment of Wireline Services Offering)	CC Docket No. 98-147
Advanced Telecommunications Capability)	
)	
and)	
)	
Implementation of the Local Competition)	CC Docket No. 96-98
Provisions of the)	
Telecommunications Act of 1996)	

**COMMENTS OF JOINT COMMENTERS
CORECOMM INC, VITTS NETWORKS, INC., AND LOGIX, INC.**

CoreComm Inc.("CoreComm"), Vitts Networks, Inc. ("Vitts"), and Logix, Inc. ("Logix") (collectively "Joint Commenters") submit these comments in response to the Commission's notice of proposed rulemaking issued August 11, 2000,¹ seeking comment on the court's partial remand of the Commission's collocation rules in *GTE Services Corp. v. FCC*² and other revisions to the FCC's local competition rules addressing the expanding use of next generation network architecture by incumbent LECs.

ARGUMENT

In the Telecommunications Act of 1996,³ Congress established a structural framework for opening the monopoly local exchange telecommunications market to access by competing

¹ See *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Order on Reconsideration and Second Further Notice of Proposed Rulemaking and Fifth Further Notice of Proposed Rulemaking, CC Docket No. 98-147, FCC 00-297 (rel. August 11, 2000) ("NPRM").

² *GTE Service Corp v. FCC*, 205 F.3d 416 (D.C. Cir. 2000), aff'ing in part, rev'ing in part, *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, First Report and Order and Further Notice of Proposed Rulemaking, CC Docket No. 98-147, 14 FCC Rcd 4761 (1999)("Collocation Order").

³ See Pub. L. 104-104, 110 Stat. 56 (codified as amended in various sections of Title 47 of the United States Code).

telecommunications providers. Within that framework, Congress imposed a tripartite set of common carrier obligations under which incumbent LECs must provide interconnection, network access, and physical collocation. By imposing these obligations, Congress sought, among other things, to restructure the existing local exchange network, accelerating private sector deployment of advanced telecommunications and information technologies and services to all Americans.⁴ The Commission must now take the steps necessary to complete this restructuring, enforcing compliance with the competitive access obligations imposed by Congress on ILECs. While ILECs will undoubtedly urge a crabbed reading of their obligations under the Act, the Commission should exercise the full measure of its authority with regulations that guarantee: (1) the CLECs' statutory right to collocate the entire range of contemporary telecommunications equipment that serve to facilitate interconnection and access to network elements; (2) collocation at remote terminals; (3) expanded access to next generation network architectures being deployed by incumbent LECs; (4) maintenance of existing copper loops otherwise subject to abandonment; (5) collocation necessary for line sharing and line splitting; and (6) space reservation in accordance with national guidelines.

I. THE FCC SHOULD BROADLY DEFINE THE STATUTORY OBLIGATION OF INCUMBENT LECs TO PROVIDE COLLOCATION "NECESSARY" FOR INTERCONNECTION OR ACCESS TO UNBUNDLED ELEMENTS.

By its terms, Section 251(c)(6) of the Act broadly obligates incumbent LECs to "provide on terms and conditions that are just and reasonable, and nondiscriminatory, for physical collocation of equipment *necessary* for interconnection or access to unbundled elements."⁵

⁴ S. CONF. REP. No. 104-230 at 1 (1996); *see also Iowa Utils Bd. v. FCC*, 120 F.3d 753, 791 (8th Cir. 1997) (stating that Congress passed the 1996 Act, in part, "to erode the monopolistic nature of the telephone industry by obligating [ILECs] to facilitate the entry of competing companies into local telephone service").

⁵ 47 U.S.C. § 251(c)(6) (emphasis added).

Given the explicit nature of this provision, the FCC should regard the court's decision in *GTE Services*, as an invitation to provide a cogent rationale for exercising the full extent of its authority in defining the statutory obligation of incumbent LECs to provide collocation. This proceeding is an opportunity for Commission to define the scope of its authority to require collocation – and adopt collocation standards coextensive with that authority – just as it sought to do in responding to the Supreme Court's decision directing the Commission to further justify its definition of the network element unbundling obligations.⁶ For, as in *AT&T v. Iowa Utilities Board*, the court in *GTE Services* did *not* hold the Commission's collocation requirements unlawful, *per se*. To the contrary, the court in *GTE Services* pointed out the perceived absence of a limiting standard for defining the equipment eligible for collocation -- *i.e.*, equipment that is “necessary” for interconnection and access to UNEs.

Joint Commenters submit that Section 251(c)(6) delegates broad interpretive authority to the FCC to determine the collocation that is “necessary” in implementing the procompetitive goals of the Act. *First*, the “ordinary and fair meaning of the term “necessary,” as used in that section, allows the FCC to require LECs to provide collocation that advances the pro-competitive objectives of the Act. *Second*, the structure of Section 251(c)(6) and the juxtaposition of the word “necessary,” demonstrates that the incumbent LECs' obligation to allow collocation is coextensive with their obligation to provide interconnection and access to network elements on just and reasonable and nondiscriminatory terms and conditions. *Third*, and in light of this broad authority, the Commission should adopt rules governing collocation that create competitive

⁶ *AT&T v. Iowa Utilities Board*, 525 U.S. 366 (1999) (“*AT&T v. Iowa Utilities*”).

**Corecomm, Inc., Vitts Networks, Inc.
and Logix, Inc.
Docket Nos. 98-147 and 96-98
10/12/00**

parity between retail local exchange service offered by incumbent LECs and their CLEC

wholesale customers.

A. The Commission Should Adopt A Broad Definition Of “Necessary” That Advances The Procompetitive Principles That Animate The Act.

In adopting regulations defining the scope of collocation “necessary for interconnection and access to unbundled network elements,” the FCC must begin by adopting a meaningful definition of the term “necessary,” as used in Section 251(c)(6) of the Act. In doing so, the Commission must address the court’s concerns in *GTE Service* that the “used or useful” standard adopted by the FCC in its *Collocation Order* could permit CLECs to collocate equipment with functionalities far removed from interconnection or network access, such as payroll, accounting or marketing equipment.⁷ Illustrating its point, the court stated that the term necessary “is *at first blush*, fairly straight forward. Something is necessary if it is required or *indispensable* to achieve a certain result.”⁸ However, the court did *not* adopt such a restrictive definition of the word “necessary,” nor did it require the FCC to do so on remand. To the contrary, in remanding certain of the Commission’s collocation rules, the court held that “a statutory reference to ‘necessary’ must be construed in a fashion that is consistent with the *ordinary and fair meaning of the word* . . . so as to limit ‘necessary’ to that which is required *to achieve a desired goal*.”⁹

The “ordinary and fair meaning of the word” *necessary*, as it appears in Section 251(c)(6), is clearly intended to distinguishes collocation that promotes or fulfills the

⁷ 205 F.2d at 423.

⁸ *Id.* (emphasis added).

⁹ *Id.* at 423 (emphasis added). The court cautioned further that:

[w]e do not mean to vacate the Collocation Order to the extent that it merely requires LECs to provide collocation of competitors’ equipment *that is directly related to* and thus *necessary, required or indispensable* to “interconnection or access to unbundled network elements.” *Anything beyond this, however, demands a better explanation* from the FCC, for the current rules under the Collocation Order make no sense in light of what the statute itself says.

Id. at 424 (emphasis added).

procompetitive goals of the Act. This interpretation of the term “necessary” is considerably broader than the interpretation of the “necessary and impair” standard, adopted by the FCC under Section 251(d)(2),¹⁰ in its *Third Report and Order* on remand from the Supreme Court’s decision in *AT&T v. Iowa Utilities*. There, the Court found that the FCC’s *Local Competition Order* – which defined UNEs without regard to available alternatives or any adverse operational impact on the incumbent LECs – reduced the “necessary and impair” standard to mere surplusage,¹¹ “allow[ing] entrants, rather than the Commission, to determine whether access to *proprietary* elements is necessary and whether the failure to obtain access to *nonproprietary* elements would impair the ability to provide service”¹² The “necessary” requirement in Section 251(c)(6) is, however, far less restrictive than the “necessary and impair” standard in Section 251(d)(2). First, the “necessary and impair” requirement in Section 251(d)(2) is a *proviso*, restricting the UNE access obligation imposed in the previous subsection, Section 251(c)(3).¹³ In contrast, the

¹⁰ Section 251(d)(2) of the Act provides that:

in determining what network elements should be made available for purposes of subsection (c)(3) of this section, the Commission shall consider, at a minimum, whether –

- (A) access to such network elements as are proprietary in nature is *necessary*; and
- (B) the failure to provide access to such network elements would *impair* the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer.

⁴⁷ U.S.C. § 251(d)(2)(emphasis added).

¹¹ *Iowa Utilities*, 525 U.S. at 388-389, quoting *Local Competition Order* at ¶ 283. According to the Court, the FCC’s rationale that a CLEC would not request access to the incumbent LEC’s network element, unless that was the least expensive and best quality, gave the CLEC’s unilateral authority to determine the scope of the incumbent LEC’s obligation to provide access to network element. 525 U.S. at 389.

¹² *Id.* (emphasis added).

¹³ As such, the “necessary and impair” standard in Section 251(d)(2) is entitled to strict construction. For “where there is doubt concerning the extent of the application of the proviso on the scope of another provision’s operation, the proviso is strictly construed.” N. Singer, 2A *Sutherland Statutes and Statutory Construction*, § 47:08 at 236 (6th Ed. 2000).

term “necessary” appears in Section 251(c)(6) -- not as a *proviso*, but in its more conventional sense – in adding an new obligation (*i.e.*, collocation) that *enhances* the competitive access obligations (interconnection and access to UNEs) imposed in the same subsection. Second, unlike the “necessary” standard in Section 251(d)(2) – which is a cumulative limitation that applies only to *proprietary* network elements, adding to the “impair” limitation applied generically to all network elements – the term “necessary” in Section 251(c)(6) neither adds to any other restriction nor does it concern proprietary network elements.

The Supreme Court’s decision in *McCulloch v. Maryland*,¹⁴ upholding Congress’s authority to establish a National Bank, validates this textual analysis of Section 251(c)(6). In *McCulloch*, the promoters of the Bank -- acknowledging the absence of any *explicit* authority among the powers enumerated in Article I, Section 8 of the Constitution – inferred congressional authority from the “necessary and proper” clause, thus occasioning Chief Justice Marshall’s now famous exegesis on the term “necessary.”¹⁵ Noting the wide range of possible meanings of “necessary” -- from “convenient” to “indispensable”¹⁶ -- Justice Marshall stressed the *context* in which the term was used, contrasting: (a) the broad, *unqualified* use of the term “necessary” in Article I, Section 8 to define the means by which Congress could exercise its enumerated powers; with (b) the restrictive use of the term “absolutely necessary” in Article I, Section 10, in cabining state authority to levy import duties. Upholding the Bank as a “necessary and proper” means of exercising Congress’s powers, Justice Marshall explained that:

¹⁴ 17 U.S. 316 (1819).

¹⁵ *Id*

¹⁶ *Id.* at 414 (“[a] thing may be necessary, very necessary, absolutely or indispensably necessary”).

1st. The clause is placed among the *powers* of congress, *not* among the *limitations* on those powers. 2d. Its terms purport to *enlarge* not to *diminish* the powers vested in the government. *It purports to be an additional power, not a restriction on those already granted.* No reason has been, or can be assigned for thus concealing an intention to narrow the discretion of the national legislature, under words which purport to enlarge it.¹⁷

As in *McCulloch*, Section 251(c)(6) employs the term “necessary,” without qualification, in providing for collocation that enables interconnection and network access.¹⁸

Such is the “fair and ordinary” meaning of “necessary” that emerges from literally hundreds of judicial opinions addressing the use of the term in the context of common carrier and franchised utility regulation. The Supreme Court has interpreted the phrase “public convenience and necessity” – as used in a panoply of statutes -- to delegate congressional authority broadly to agencies in formulating regulatory policy.¹⁹ In these cases, and in many others, the term “necessary” has *never* been held to require absolute indispensability but, rather, as being satisfied by such considerations as “the desirability of *competition*, the desirability of *different kinds of service*, and the desirability of *improved service*.”²⁰ The most descriptive and frequently cited

¹⁷ *Id.* at 419 (emphasis added).

¹⁸ See also, e.g., *Armour & Co. v. Wantock*, 323 U.S. 126 (1945)(holding that firefighting employees, while not indispensable, were “necessary to the production of goods or commerce” under Fair Labor Standards Act, even though they produced no goods and engaged in no commerce”).

¹⁹ See, e.g., *Bowman Transportation, Inc. v. Arkansas-Best Freight System, Inc.*, 419 U.S. 281 (1974); *Shaeffer Transportation Co. v. United States*, 355 U.S. 83 (1957); *United States v. Detroit & Cleveland Navigation Co.*, 326 U.S. 236, 241 (1945); *ICC v. Parker*, 326 U.S. 60, 65-66 (1945); *Denver & Rio Grande R.R. Co v. United States*, 312 F. Supp. 329, 332-333 (D. Colo. 1970), *aff’d mem.*, 400 U.S. 921; *United Air Lines, Inc. v. Civil Aeronautics Board*, 198 F.2d 100 (7th Cir. 1952).

²⁰ *Nashua Motor Express v. United States*, 230 F. Supp. 646, 652 (D.C., N.H. 1964) (three-judge panel); see also, e.g., *Bowman v. Arkansas-Best*, *supra*, (endorsing increased intramodal competition as permissible element of public convenience and necessity); *United States v. Dixie Express*, 389 U.S. 409 (1967) (same); *FCC v. RCA Communications, Inc.*, 346 U.S. 86 (1953)(same under Communications Act); *Eastern Air Lines, Inc. v. CAB*, 271 F.2d 752, 759 (2d Cir. 1959)(where agency, based upon its own expert knowledge of the industry under its control, determines that competition in and of itself is a desirable objective, that determination must be upheld); *Petroleum Carrier Corporation v. United States*, 258 F. Supp. 611 (D.C., M.D. Fla. 1966)(three-judge panel). Cf. *A.B. & C. Motor Transp. Co., Inc. v. United States*, 69 F. Supp. 166 (D.C. Mass. 1946)(“[a]n increase in competition is *not* a

explication of the word “necessary” is that offered by the Supreme Court of Illinois in *Wabash, Chicago & Western Ry. Co. v. Commerce Commission*,²¹ to the effect that:

the word “necessity” is not used in its lexicographical sense of “indispensably requisite.” If it were, no certificate of public convenience and necessity could ever be granted. The first telephone was not a public necessity under such definition, nor was the first electric light. Even the construction of a waterworks system in a village is seldom necessary, though highly desirable. However, any improvement which is highly important to the public convenience and desirable for the public welfare may be regarded as necessary. If it is of sufficient importance to warrant the expense of making it, it is a public necessity.²²

Where, as here, Congress has unambiguously expressed the need for competitive local exchange service – in legislation mandating comprehensive competitive access at all links and nodes in the incumbent network -- only a broad interpretation of “necessary” will suffice.

Congress having dramatically expanded the power of the FCC to order physical collocation in adopting Section 251(c)(6) of the Act, the task of inferring a bright-line limiting principle from the word “necessary” is understandably difficult. It is worth remembering that in overturning a previous directive by the FCC requiring incumbent LECs to allow physical collocation, the court in the 1994 *Bell Atlantic* case based its decision *entirely* upon the *absence* of an express legislative mandate, like that contained in Section 251(c)(6).²³ The *Bell Atlantic* court dismissed the FCC’s claim of authority under Section 201(a) of the Communications Act,

reason for denying the Commission’s authority to issue a certificate.)”

²¹ 141 N.E. 212 (Ill. 1923).

²² *Id.* at 418; *see also, e.g., Chesapeake & Ohio Ry. v. United States*, 283 U.S. 35, 42 (1931); *Zachs v. Department of Public Util.*, 547 N.E.2d 28, 32 (Mass. 1989); *Thomson v. State Commerce Commission*, 15 N.W.2d 603 (Iowa, 1944); *Kenneson v. City of Bridgeport*, 33 A.2d 313, 314 (Conn. 1943); *San Diego & Coronado Ferry Co. v. Railroad Commission*, 292 P. 640, 643 (Cal. 1930); *Yazoo & M.V.R. Co. v. Public Service Commission*, 128 So. 39, 40 (Louisiana, 1930); *Wisconsin Telephone C. v. Railroad Commission*, 156 N.W. 614 (Wisc. 1916); Jones, *Origins of the Certificate of Public Convenience and Necessity: Developments in the States*, 79 Colum. L. Rev. 426 (1979) (tracing history of the term “public convenience and necessity”).

²³ *See Bell Atlantic Telephone Co. v. FCC*, 24 F.3d 1441 (D.C. Cir. 1994).

which authorizes the FCC to “require physical connections with other carriers.”²⁴ The court analogized Section 201(a) to Section 11104(a) of the Interstate Commerce Act (“ICA”) – which authorizes the ICC (now the Surface Transportation Board or “STB”) to order “switch connections” between railroads.²⁵ Pursuing the analogy to its logical end, the court seized upon Section 11103(a) of the ICA -- which authorizes the ICC to order carriers to open their “terminal facilities” to other carriers, “including main-line tracks for a reasonable distance outside of a terminal”²⁶ – and based its decision upon the absence of any correlative provision in the Communications Act.²⁷ Subsequently, in adopting Section 251(c)(6), Congress closed the gap in the Commission’s authority identified in *Bell Atlantic v. FCC*, expressly authorizing the Commission to order physical occupation of incumbent LEC facilities.

In these circumstances, a broad interpretation of the Commission’s collocation authority can scarcely be avoided. For “[i]t is always appropriate to assume that our elected representatives, like other citizens, know the law.”²⁸ Where, as here, Congress adopted Section 251(c)(6) specifically to overrule the court’s narrow interpretation of the FCC’s authority in *Bell Atlantic v. FCC*, the statute should be interpreted broadly in accordance with the Congress’s expansion of Commission authority.²⁹ That the court in *Bell Atlantic* specifically noted the absence of a provision in the Communications Act analogous to the “terminal rights” authority

²⁴ *Id.* at 337, quoting 47 U.S.C. § 201(a).

²⁵ *Id.* citing 49 U.S.C. § 11103(a).

²⁶ *Id.*, quoting 49 U.S.C. § 11102(a) (emphasis added).

²⁷ *Id.*

²⁸ *Cannon v. University of Chicago*, 441 U.S. 677, 696-696 (1979).

²⁹ *See Public Citizen, Inc. v. Federal Aviation Administration*, 988 F.2d 186, 195-196 (D.C. Cir. 1993).

conferred under Section 11303(a) of the ICA is particularly significant. Congress must be presumed to have been aware of the court's rationale, in adopting a very similar provision in Section 251(c)(6).³⁰ Authority to order terminal rights under Section 11303(a) of the ICA is almost identical to the "necessary" standard included by Congress in Section 251(c)(6) of the Act.³¹ Nevertheless, the authority of the STB's predecessor agency (the ICC) was consistently upheld by the courts to facilitate the free flow of traffic between carriers and facilitating inter-carrier competition.³² Congress must be deemed to have conferred similarly broad authority under Section 251(c)(6).

Further confirmation of the FCC's broad discretion under Section 251(c)(6) is the Supreme Court's decision in *National Railroad Passenger Corp. v. Boston and Maine Corp.*³³ There, the Court upheld the ICC's interpretation of the condemnation provisions of the Rail Passenger Service Act, which authorized the ICC – at the request of Amtrak – to condemn [freight railroad] property . . . *required* for intercity rail passenger service.”³⁴ Based on this

³⁰ See *Cannon v. University of Chicago*, *supra*; Cf. *Albermarle Paper Co. v. Moody*, 422 U.S. 405, 414, n. 8 (1975) (“Congress is presumed to be aware of an administrative or judicial interpretation of a statute and to adopt that interpretation when it re-enacts a statute without change).

³¹ Specifically, Section 11303(a) authorizes the STB to order terminal rights to other carriers “including main-line tracks for a reasonable distance outside of a terminal,” where such use *is practicable* and *in the public interest* without substantially *impairing* the ability of the [tenant] rail carrier . . . to handle its own business.” 49 U.S.C. § 11303(a).

³² See, e.g., *Florida East Coast Railway Co. v. United States*, 256 F. Supp. 986, 989 (three-judge panel) (M.D. Fla. 1966).

³³ 503 U.S. 407 (1992) (“*NRPC v. Boston and Maine*”), *rev'g Boston and Maine Corp. v. ICC*, 911 F.2d 743 (D.C. Cir. 1990).

³⁴ 45 U.S.C. § 562(d)(1). The need for the property sought by Amtrak was deemed to be established *unless* the ICC found that the conveyance of the property would impair the ability of the freight railroad to carry out its common carrier obligations, or if Amtrak could adequately be met by the acquisition of some alternative property available on reasonable terms. *Id.* at §562(d)(1)(A)-(B).

statutory authority, the ICC had condemned the Boston and Maine's entire fee interest in the property, notwithstanding that: (1) such fee interest was *not* indispensable to Amtrak's operations; (2) Amtrak could have provided the same service with a leasehold interest (*i.e.*, trackage rights); and (3) Amtrak intended not to retain the fee interest, but instead planned to reconvey the fee to a third party. Rejecting the court of appeals' interpretation of the term "required" as meaning "indispensable to Amtrak's operations,"³⁵ the Supreme Court upheld the ICC's less restrictive interpretation of "required" to mean "useful or appropriate."³⁶ In support of its decision, the Court cited Chief Justice Marshall's interpretation of the word "necessary" in *McCulloch, supra*, reading the word "'necessary' to mean 'convenient, or useful,' and rejecting a stricter reading of the term which would have limited congressional power under the Constitution to the 'most direct and simple' means available."³⁷

Accordingly, in inferring a limiting standard from the term "necessary" under Section 251(c)(6), the Commission is not bound by the most restrictive possible definition of the term, but rather is free to interpret of that statutory standard in a manner that advances the procompetitive goals of the Act.

B. The Commission May Require Physical Collocation That Facilitates The Statutory Obligation Of Incumbent LECs To Provide Interconnection And Access To Network Elements On "Just and Reasonable" and "Nondiscriminatory" Terms and Conditions.

Joint Commenters do not contend that the FCC is free to order collocation of equipment that is unrelated to any telecommunications service. The statute clearly requires that the

³⁵ *Id.* at 417.

³⁶ *Id.* at 418.

³⁷ *Id.* at 419.

equipment must have a direct relationship with interconnection or network access.³⁸ In that case, the incumbent LEC obligation to provide collocation is, by definition, coextensive with the incumbent LEC obligation to provide interconnection and network access at competitive parity, and on “just and reasonable” and “nondiscriminatory” terms and conditions.³⁹ The breadth of agency authority conferred under less explicit statutes has been affirmed by the courts in a variety of contexts, involving: (a) extensive industry restructuring, and (b) regulation of ancillary services remote from the primary object of the statute. Where, as here, Congress has already established a framework for restructuring the local exchange market, creating dual roles for incumbent LECs -- one as a retail service provider, and another as a wholesale common carrier serving its retail competitors (complete with competitive parity obligations and unqualified prohibitions against nondiscrimination) -- the Commission is free to adopt broad, generic, access requirements. However, those requirements must be shown to advance the obligation of incumbent LECs to provide reasonable and nondiscriminatory service and equal competitive access.

This “limiting standard” flows inexorably from the statutory structure designed by Congress. As it appears in Section 251(c)(6), the term “necessary” directly modifies the phrase “for interconnection and access to unbundled elements.”⁴⁰ The term “necessary” therefore comprehends the entire scope of the interconnection and network access obligations imposed in Section 251(c)(2)-(3), which obligations are further defined in those subsections. Thus, Section

³⁸ According to the Court in *GTE Services*, to be eligible for collocation, equipment must be “*directly related to*” or “*necessary, required or indispensable to interconnection or access to unbundled network elements.*” 205 F.3d at 424 (emphasis added) citing 47 U.S.C. §251(c)(6).

³⁹ See 47 U.S.C. § 251(c)(2)-(3).

⁴⁰ *Id.*

251(c)(2) requires incumbent LECs to provide interconnection “that is *at least equal* in quality to that provided by the local exchange carrier *to itself* or to any subsidiary [or] affiliate,” and “on rates terms and conditions that are just and reasonable and nondiscriminatory.”⁴¹ Section 251(c)(3) similarly obligates incumbent LECs to provide access to network elements on “rates terms and conditions that are just and reasonable and nondiscriminatory. . . .” 47 U.S.C. § 251(c)(3). Section 251(c)(6), in turn, reaffirms the incumbent LECs obligation to provide collocation on terms and conditions that are “just and reasonable and nondiscriminatory.” 47 U.S.C. § 251(c)(6). Accordingly, incumbent LECs must provide for collocation of any equipment related to interconnection or network access, or which the incumbent LEC itself uses to provide telecommunications service.

Such a common sense interpretation of Section 251(c)(6) – which emerges naturally from these cascading statutory duties of reasonableness, nondiscrimination and competitive parity – is in perfect harmony with longstanding precedent spanning the entire history of modern regulatory jurisprudence. The basic regulatory standard of reasonableness and nondiscrimination expressed in the 1996 Act is an essential feature of virtually all federal regulatory statutes -- including the Interstate Commerce Act (“ICA”),⁴² the Natural Gas Act,⁴³ the Federal Power Act,⁴⁴ as well as the Communications Act – albeit (in each of these cases) less emphatically than in the 1996 Act. The courts have observed repeatedly that such statutory proscriptions against “undue” or

⁴¹ 47 U.S.C. § 251(c)(2)(C)-(D) (emphasis added).

⁴² 49 U.S.C. § 2, 3(1) (1977).

⁴³ 15 U.S.C. § 717 *et seq.*

⁴⁴ 16 U.S.C. § 824.

“unreasonable” discrimination comprehend *every* form of unreasonable discrimination within the power of Congress to condemn.⁴⁵ The Supreme Court has said that the purpose of Congress in adopting such provisions was nothing less than to “cut up by the roots *every* form of discrimination, favoritism and inequality.”⁴⁶ Well before passage of the 1996 Act, the courts upheld the Commission’s broad authority under Section 202(a) of the Communications Act, not only to *define* the scope of discrimination deemed unreasonable, but also to fashion prospective *remedies*, through injunction or by prescribing just and reasonable terms and conditions of service.⁴⁷

It is no understatement that even these traditional regulatory statutes have justified agency action *far* more sweeping than collocation, exemplified by the Federal Energy Regulatory Commission’s (“FERC’s”) restructuring of the natural gas industry and electric industries. Thus, in *Associated Gas Distributors v. FERC*,⁴⁸ the court upheld Order No. 436⁴⁹-- which imposed open access requirements on vertically integrated, producer-owned or affiliated natural gas pipelines -- based *solely* upon the FERC’s authority to prevent undue discrimination in Section 5 of the NGA.⁵⁰ Order No. 436 eliminated overnight the longstanding industry structure (involving commodity sales bundled with transportation) and required pipelines -- *for*

⁴⁵ See, e.g., *Merchants Warehouse Co. v. United States*, 283 U.S. 501, 512 (501); *Louisville & Nashville R.R. Co. v. United States*, 282 U.S. 740, 749-750 (1931).

⁴⁶ See, e.g., *Louisville & Nashville R.R. Co. v. Mottley*, 219 U.S. 467, 478 (1911)(emphasis added).

⁴⁷ See, e.g., *National Association of Motor Bus Owners v. FCC*, 460 F.2d 561, 565 (D.C. Cir. 1974).

⁴⁸ 824 F.2d 981 (D.C. Cir. 1986).

⁴⁹ 50 Fed. Reg. 42,408 (1985).

⁵⁰ See 15 U.S.C. § 717(d).

the first time -- to act as common carriers, transporting gas for third party shippers on the same terms and conditions that they do for themselves.⁵¹ More recently, in *Transmission Access Policy Study Group v. FERC*,⁵² the court upheld FERC Order 888⁵³ -- including a *generic* involuntary wheeling obligation imposed on *all* public utilities with electric transmission facilities -- dismissing industry objections that the Energy Policy Act of 1992 authorized involuntary wheeling only on an *individual, case-by-case* basis.⁵⁴ Citing the FERC's authority under nondiscrimination provisions of the Federal Power Act ("FPA"),⁵⁵ the court upheld the generic involuntary wheeling requirement, based largely anecdotal findings of discrimination and denials of competitive access to transmissions facilities by large integrated power companies.⁵⁶

It is of no moment that physical collocation of CLEC equipment in LEC central office space is ancillary to -- and one link removed from -- interconnection and access to network elements. First, collocation access is expressly provided for by statute to facilitate these other

⁵¹ Acknowledging that the NGA imposed no explicit common carrier obligation on pipelines -- in contrast to railroads, pipelines, or telecommunications carriers -- the court nonetheless upheld the open access requirement, observing that "the [NGA] fairly bristles with concern for undue discrimination." *AGD, supra*, 824 F.2d at 998.

⁵² 2000 WL 762706 *3, **7-8 (D.C. Cir.).

⁵³ See Order No. 888, FERC Stats. & Regs. ¶ 31,036 (1996) clarified, 76 FERC ¶¶ 61,009, 61,347(1996), on reh'g, Order No. 888-A, FERC Stats. and Regs. ¶ 31,048 (clarified, 79 FERC ¶ 61,182 (1997); on reh'g, Order No. 888-C, 82 FERC ¶61,046 (1998).

⁵⁴ See Pub. L. No. 102-496, 106 Stat. 2776, 2915-16, codified at 16 U.S.C. §§ 824j-k.

⁵⁵ See 16 U.S.C. § 824d-e.

⁵⁶ *Id.* at *3. The breadth of the court's interpretation of the FPA antidiscrimination provisions in *Transmission Access Policy Study Group* is noteworthy. For, previously, the Supreme Court -- in holding that electric transmission companies were subject to the Sherman Antitrust Act -- had ruled that the Federal Power Commission *lacked* authority to require wheeling. See *Otter Tail Power Company v. United States*, 410 U.S. 366 (1973). Numerous other courts had echoed this notion in striking down attempts by the FERC to impose a generic wheeling requirement. See *Florida Power & Light v. FERC*, 660 F.2d 668 (5th Cir. Unit B Nov. 1981); *New York State Electric & Gas Corp. v. FERC*, 638 F.2d 388 (2d Cir. 1980); *Richmond Power & Light v. FERC*, 574 F.2d 610 (D.C. Cir. 1978).

competitive access obligations. Second, even if it were not, the courts have consistently upheld comprehensive regulation of the most remote activities, when provided in connection with regulated service, citing the possibility of regulatory evasion. Seminal in this regard is the Court's decision in *Southern Pacific Terminal Co. v. ICC*,⁵⁷ affirming the ICC's finding that river terminal facilities were "'necessary in the transportation and delivery' of the interstate and foreign freight transported by . . . the Southern Pacific [Railroad]" and thus subject to the jurisdiction of the ICC.⁵⁸ According to the Court:

the wharves of the terminal company are but incidents . . . in the transshipment of the products in export trade, and their regulation is within the power of the [ICC]. To hold otherwise would be to disregard . . . the substance of things, and make evasions of the act of Congress quite easy.⁵⁹

Such prophylactic control of nominally *unregulated* upstream or downstream service has been upheld for pipelines carrying only their own crude oil,⁶⁰ stockyards,⁶¹ warehouses,⁶² intraport rail systems and railroad tap lines,⁶³ real estate transactions,⁶⁴ and tank terminals operated by gasoline pipelines.⁶⁵

⁵⁷ 219 U.S. 498 (1911).

⁵⁸ *Id.* at 522-527; *see also United States v. Brooklyn Eastern Dist. Terminal*, 249 U.S. 296 (1919).

⁵⁹ *Id.* at 527.

⁶⁰ *See The Pipeline Cases*, 234 U.S. 548, (Jun 22, 1914).

⁶¹ *See United States v. Union Stock Yard & Transit Co.*, 226 U.S. 286 (1912).

⁶² *See Union Pacific Railroad Co. v. United States*, 313 U.S. 450 (1941).

⁶³ *See The Tap Line Cases*, 234 U.S. 1 (1913); *Lone Star Steel Co. v. McGee*, 380 F. 2d 640 (5th Cir. 1967).

⁶⁴ *See, e.g., United States v. Michael Schiavone & Sons, Inc.*, 430 F.2d 231 (1st Cir. 1970).

⁶⁵ *See Farmers Union Exchange, Inc. v. Great Lakes Pipe Line Co.*, 297 ICC 645 (1956).

Where, as in the 1996 Act, Congress established a structural framework under which the incumbent LECs possesses a dual role -- (1) as a retail local telecommunications provider; and (2) as a wholesale provider of interconnection service and access to network elements -- the incentive of incumbent LECs to discriminate in the provision of collocation, and the resulting need for heightened regulatory scrutiny, is manifest.⁶⁶ In imposing the obligation to provide interconnection, Congress explicitly acknowledged this dual role, requiring incumbent LECs to provide interconnection “at least equal in quality to that provided . . . *to itself or to any subsidiary . . .*”⁶⁷ Congress therefore gave the Commission's considerably broader authority to prevent discrimination under Section 251 than under the other statutory schemes discussed above (*including* Section 202(a) of the 1934 Act).⁶⁸ The Commission itself has observed that the prohibition against discrimination that appears throughout Section 251 is absolute, and is not qualified even by terms like “undue” or “unjust and unreasonable.” Accordingly, in interpreting the prohibition on discrimination under Section 251, the Commission has stated that “the term nondiscriminatory, *as used throughout section 251*, applies to the terms and conditions an incumbent LEC imposes on third parties as well as on itself.”⁶⁹ As thus interpreted, Section

⁶⁶ In interpreting these and other provisions of the Act, the FCC recognized the incentive of incumbent LEC (as wholesale provider) to discriminate in favor of its retail arm and against CLECs. According to the Commission:

Given that the incumbent LEC will be providing interconnection to its competitors pursuant to the purpose of the 1996 Act, the LEC has an incentive to discriminate against its competitors by providing them less favorable terms and conditions of interconnection than it provides itself. Permitting such circumstances is inconsistent with the procompetitive purpose of the Act.

Local Competition Order at ¶ 218.

⁶⁷ 47 U.S.C. § 251(c)(2)(C) (emphasis added).

⁶⁸ *Id.*

⁶⁹ *Local Competition Order* at ¶ 218.

251(c)(6) clearly authorizes the Commission to impose stringent collocation requirements on a generic basis to guard against discrimination by an incumbent in favor of itself and to ensure competitive access.

In the following sections of these comments, Joint Commenters suggest specific rule changes that will achieve this overall statutory mandate.

II. THE COMMISSION SHOULD REESTABLISH AND STRENGTHEN RULES GOVERNING COLLOCATION IN ILEC CENTRAL OFFICES.

A. The Commission Should Require Incumbent LECs to Allow Collocation Of All Equipment That Facilitates Interconnection Or Network Access On Terms That Are Just And Reasonable And Non Discriminatory.

In the its *NPRM*, the Commission asked for comment on whether it should adopt the definition of necessary that it employed in the *UNE Remand Order* concerning access to proprietary network elements. In the *UNE Remand Order*, the Commission stated that a network element is “necessary” under Section 251(d)(2)(a), “if taking into consideration the availability of alternative elements outside the incumbent's network . . . lack of access to that element would . . . preclude a requesting carrier from providing the services it seeks to offer.” Such a definition is too restrictive and would give incumbent LECs free reign to discriminate in providing collocation, interconnection and network access. Moreover, there is no need for the Commission to employ the same definition of necessary for collocation as it applied to proprietary UNEs, as the necessary standard for access to proprietary UNEs was intended to afford some protection to proprietary information. As noted above, this is not a consideration with respect to collocation of equipment on ILEC premises and, therefore, there is no need to assume that Congress intended the same restrictive definition to apply.

Instead, consistent with the full breadth of its authority under Section 251(c)(6), the Commission should require incumbent LECs to provide for collocation of any and all equipment that: (i) is used by the incumbent LEC *itself* (or an affiliate) to provide interconnection or network access; or (ii) facilitates interconnection or access to UNEs, on terms and conditions that are “just and reasonable” and “nondiscriminatory.” As explained below, this definition of “necessary” will obviate arguments over physical features and functionalities of equipment, creating a flexible, and manageable, standard for collocation that accommodates evolving telecommunications technology. Even if equipment used to provide interconnection or access to UNEs contains other functions that are not themselves necessary for interconnection or access to UNEs, such multi-function equipment should continue to be eligible for interconnection under the necessary standard as a just and reasonable condition of collocation. Such a definition would require incumbent LECs to permit CLECs to perform their own cross-connects with other CLECs at central offices, just as incumbent LECs themselves cross-connect with CLECs. That definition would also require incumbent LECs to provide collocation at remote terminals and to establish just and reasonable and nondiscriminatory terms and conditions governing the rights and priorities of collocators at all incumbent premises.

B. CLECs Should Be Allowed To Collocate All Equipment That Facilitates Interconnection or Network Access, Regardless Of Its Functionality.

Consequently, the Commission should reinstitute its collocation rules under in accordance with this definition of “necessary” in Section 251(c)(6). CLECs should be allowed to collocate equipment that provides packet switching or routing, such as DSLAMs, routers, asynchronous transfer mode (“ATM”) multiplexers, and remote switching modules necessary to

provision of advanced services.⁷⁰ While such equipment clearly facilitates interconnection and

network access, it is also essential to the provision of advanced telecommunication services.

And incumbent LECs are increasingly installing such equipment – or very similar equipment – to provide interconnectivity between the local loop and transport. Incumbent LECs will

erroneously contend that such equipment provides switching, and thus is not necessary for

interconnection and network access, relying on the Commission’s suggestion in its *Local*

Competition Order, that “we do not impose a general requirement that switching equipment be

collocated since it does not *appear* that it is used for actual interconnection or access to

unbundled network elements.⁷¹ However, such a distinction is based on an overly simplistic

definition of “interconnection” and “network access,” an unduly narrow view of the function of

“switching”, is unsupported by Commission precedent, and in any event, is no longer a valid

characterization of the functions served by modern DSLAMs, routers and ATM multiplexers.

Even assuming, arguendo, that advanced services equipment provided *only* a switching function – and it does *not* – the conclusion that switching equipment serves no interconnection or network access function is completely false. The Act supplies no fixed definition of

“interconnection” or “access” to network elements. Nor has the Commission ever adopted any operational definition of switching that would rule out switching as performing an

interconnection or access function. At its core, interconnection encompasses all aspects of call origination, routing and completion.⁷² The function of a conventional switch is an integral part

⁷⁰ *NPRM* at ¶ 72.

⁷¹ *Local Competition Order* at 581.

⁷² The FCC has expressly acknowledged such a broad definition of interconnection in stating that:

a carrier’s opportunity to compete is also reliant upon its ability to interconnect its network with the

of interconnection, opening or closing a circuit to direct an *originating* call from one local loop to another, or to the appropriate path for transport to another central office or point of presence.

While it may be the case that an incumbent LEC switch performs no carrier-to-carrier connection within the contemplation of Section 251, a collocated *CLEC* switch *definitely* provides carrier-to-carrier connectivity and network access – between the CLEC and the ILEC – just as a loop provides interconnection between a CLEC and an incumbent LEC switch. For a collocated CLEC switch routes the CLEC signal from or to a customer from or other points on the incumbent LEC’s network. As such, the function of a switch is similar to that offered by railroad switch, that allows a train to access another line of the same or a different railroad.⁷³

The Commission has never found – based upon record evidence – that switches do not perform interconnection or network access functions. To the contrary, in its *Expanded Interconnection Orders* that preceded the 1996 Act,⁷⁴ the Commission decided against collocation of switches in incumbent LEC space – *not* because such equipment does not perform an interconnection or network access function – but rather because: (1) most interconnectors preferred to place their equipment in their own space; (2) the parties presented no evidence of

incumbent’s network. *Such interconnection allows customers on one network to call customers on another network.* If a competing carrier’s customers cannot receive calls, or their calls cannot be completed because the incumbent has not provided adequate interconnection, then the competing carrier’s ability to serve its customers is substantially hindered. Recognizing the importance of interconnection, Congress required incumbent LECs to provide a level of interconnection to competing carriers *that is indistinguishable* and at least equal in quality to that provided by the local exchange carrier to itself.

Performance Measurements and Reporting Requirements for Operations Support Systems, Interconnection, and Operator Services and Directory Assistance, Notice of Proposed Rulemaking, CC Docket No. 98-56, FCC 98-72 at ¶ 11 (1998) (emphasis added).

⁷³ See *Bell Atlantic v. FCC*, *supra*, 24 F.3 at 336 (analogizing central office interconnection to railroad switch functionality).

⁷⁴ See *Expanded Interconnection with Local Telephone Company Facilities (Transport, Phase II)*, Third Report and Order, CC Docket No. 91-141, 9 FCC Recd. 2718 (1994) (“*Expanded Interconnection Third Report and Order*”).

any technical or quality advantage to collocating switches in incumbent LEC central offices; (3) the size and weight of the switches (most of which would have occupied several hundred square feet) would lead to the exhaustion of space and require considerable property upgrades to provide for heating, ventilation and air conditioning; (4) no parties had offered any reason why it would be difficult to distinguish switching equipment from transmission equipment; (5) no parties had shown the need for collocation of such equipment to ensure fair and nondiscriminatory treatment of interconnectors by CLECs; and (6) the Commission's tariffing and general nondiscrimination requirements provided sufficient protection against unfair or unreasonably discriminatory LEC rates and practices.⁷⁵

Today, almost five years after the passage of the 1996 Act, these considerations no longer hold true. Unlike the case in the FCC's *Expanded Interconnection Order*, Congress's objective in adopting the Act was to provide for workable competition in the local exchange service market – including advanced services – in *addition* to exchange access. Nor is true at this time that most interconnectors do not seek to place certain types of advanced switching equipment in central offices. The issue *now* is not whether incumbent LECs can erect barriers to entry by interexchange carriers; at issue here is the FCC's mandate to remove all barriers to competition throughout the entire local exchange network. As the variety of services that can be offered in over the local exchange network increases, the barriers to entry by CLECs seeking to provide such service grow exponentially. These new services include the various forms of Digital Subscriber Line ("xDSL") service, line sharing, and DLC and next generation IDLC systems that push fiber farther and farther from the central office to increasingly sophisticated remote

⁷⁵ *Id.* at ¶ 35.

terminals. The impact of such technology on the variety of equipment that facilitates interconnection and network access in the central office and remote terminals is enormous, and provides substantial opportunity for incumbent LECs to exclude competition with network design choices that favor themselves or their advanced service affiliate.

Second, as predicted in the Commission's *Local Competition Order*, "modern technology has tended to blur the line between switching equipment and multiplexing equipment, which we permit to be collocated."⁷⁶ As the contemporary telecommunications market becomes increasingly characterized by packetized data traffic, there is no meaningful distinction between interconnection and switching functions, especially in equipment that is no more than data processing equipment that receives and processes data streams according to software resident in the equipment. Accordingly, equipment such as ATM switches and routers are themselves necessary for interconnection under the statutory standard whether they are viewed as integrated with other functions or not. It is worth noting that the optical concentration devices ("OCD"s) that SBC plans to employ in connection with its Project Pronto are ATM switches that provide interconnectivity to SBC's local exchange network and access to network elements, which thereby necessitates that CLECs also be permitted to deploy ATM devices in order to interconnect with these OCDs.⁷⁷

Third, the Commission has *recognized* that collocation of such equipment is necessary to prevent discrimination and reduce barriers to entry in the market for advanced services within the

⁷⁶ *Local Competition Order* at ¶ 581.

⁷⁷ *Ameritech Corp., Transferor and SBC Communications, Inc. Transferee*, CC Docket No. 98-141, Memorandum and Order FCC-00-336, at ¶ 36 (Rel. September 8, 2000) ("*Project Pronto Order*").

meaning of Section 251(c)(6). The FCC's *SBC/Ameritech Merger Order*,⁷⁸ underscores the discrimination inherent in the provision of advanced services by incumbent LECs. There, the FCC required SBC/Ameritech to create a separate advanced services subsidiary to own and operate advanced services equipment such as ATMs, OCDs and DSLAMs.⁷⁹ Indeed, the Commission's explicit motivation in imposing these conditions appears to have been the enhancement of market-opening obligations imposed under Section 251.⁸⁰ In creating an advanced services affiliate owning and collocating equipment at central offices and remote terminals of SBC/Ameritech LECs, the Commission sought to provide a strong motivation for SBC/Ameritech's incumbent LEC to allow *all* CLECs to collocate advanced services equipment at central offices and remote terminals on just and reasonable and nondiscriminatory terms and conditions.⁸¹

Having recognized the inherent incentive of incumbent LECs to favor their own advanced service offerings, or advanced service affiliates, the Commission cannot now find that collocation of advanced service equipment is not "necessary" for interconnection and network access as a generic proposition. The FCC's *Project Pronto Order* modifying the separate affiliate requirements in the *SBC/Ameritech Merger Order* underscores the need for collocation of such equipment. In its *Project Pronto Order*, the Commission allowed SBC/Ameritech LECs

⁷⁸ See *Ameritech Corp., Transferor and SBC Communications, Inc. Transferee*, CC Docket No. 98-141, Memorandum and Order 14 FCC Rcd 14712 (1999) ("*SBC/Ameritech Merger Order*").

⁷⁹ *Id.*

⁸⁰ See *SBC/Ameritech Merger Order*, slip op. at 188 ¶ 457 ("[i]f . . . the affiliates' operations become too intertwined with the incumbent, thereby frustrating the pro-competitive purposes of section 251, the incumbent would be in a position to evade its obligation under section 251(c)").

⁸¹ *Id.*; see also *Project Pronto Order*, slip op. at 8 ¶ 13 (noting that separate affiliate condition "ensur[ed] that competing providers of advanced services have nondiscriminatory access to those inputs of the incumbent needed for advanced services").

to continue to own advanced services equipment such as OCDs, ATM switches and DSLAMs placed in remote terminals and central offices subject to a number of conditions.⁸² First, SBC/Ameritech agreed to offer CLECs the right to competitive access to its all the network elements used in conjunction with its “Broadband Offering,” and to collocate OCDs, ATM routers and any other equipment at the central office used to provide advanced services.⁸³ Second, SBC/Ameritech agreed to allow CLECs the right to install “plug-in” cards in NGDLC systems.⁸⁴ Third, SBC/Ameritech agreed to allow expanded collocation at central offices and at remote terminals.⁸⁵ To the extent that the Commission’s *Project Pronto Order* is based *entirely* on the need to prevent discrimination in the provision of advanced services, similar conditions should be imposed on the rest of the incumbent LECs in this country, which have, or are developing, similar plans with regard to advanced service offerings.

That the FCC’s order approving the Bell Atlantic GTE merger makes clear that any determination made in its *Project Pronto Order* applies equally to Verizon⁸⁶ both confirms the Commission’s views regarding the inherent motivation of incumbent LECs to discriminate in favor of their own advanced service offerings and *also* effectively imposes broad collocation obligations on incumbent LECs serving approximately two-thirds of the entire country. Given

⁸² *Id.* at ¶ 21.

⁸³ *Id.* at ¶ 25.

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ See *Applications of GTE Corp., Transferor, and Bell Atlantic Corp., Transferee, for Consent to Transfer Control*, Memorandum Opinion and Order, FCC 00-221 (June 16, 2000) at ¶¶ 260 *et seq.* (“BA/GTE Merger Order”)

the generic nature of these findings, the FCC has full authority to take the next step and broadly define the collocation obligations of incumbent LECs under Section 251(c)(6).

C. The Commission Should Find Multifunction Equipment To Be Eligible For Central Office Collocation.

As discussed above, any equipment that enables interconnection or access to UNEs meets the necessary test. Further, consistent with the ordinary meaning of the words in the statute and the statutory purposes, “necessary” may be interpreted to mean that the ILEC must provide collocation of any equipment that contains the features and functionalities enabling interconnection, despite additional telecommunications functionalities that equipment may contain. This would include equipment that enables interconnection and network access by routing data routing and other functions, including switching, to the extent that any such functionalities are not themselves viewed as enabling interconnection or access to UNEs.

The same is true for interconnection equipment, the only difference being that here the technology and the market are developing more quickly. In 1996, for example, a typical Class 5 switch required hundreds of feet of floor space in a separate room, while today several modern routers or multiplexers can fit comfortably within the space of a typical 10 x 10 collocation cage. With developing technologies, integration of functionalities that was impossible in 1996 is now totally practical. One of the principal purposes of the Act was to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans.⁸⁷ In light of this purpose, there is no reason to believe that Congress intended to freeze the term equipment necessary for interconnection at the technology available in 1996, precluding collocation of subsequently-developed multi-functional technology. Therefore, it is

⁸⁷ Sen. Rept. No. 104-230, 104th Cong. 1st Sess. (March 30, 1995) at pp. 1-2.

reasonable to interpret Section 251(b)(6) as permitting collocation of a wide range of telecommunications equipment that performs many functions in addition to enabling interconnection and access to UNEs.

Denying CLECs the right to collocate so-called multifunction equipment is would effectively thwart CLECs' ability to compete. This may be readily seen by a quick review of the costs involved. The CLEC would have to run lines from the ILEC Central Office to its own switch site at considerable cost. And, this is on top of collocation space in the ILEC central office which would be necessary for interconnection and access to UNEs. When these costs are multiplied by the many times that would be required in order to use multifunction equipment to provide service, it is apparent that collocation of such equipment is necessary in order for CLECs to be able to effectively compete.

Section 251(c)(6) requires ILECs to provide physical collocation of equipment necessary for interconnection and access to UNEs on rates, terms, and conditions that are reasonable and nondiscriminatory. Thus, the Commission may define the reasonable conditions pursuant to which ILECs must offer physical collocation.⁸⁸ To preclude collocation of multifunction equipment would astronomically increase CLECs' cost of providing competitive services, especially in smaller and rural markets, because of the need to obtain separate space and communications links to backhaul traffic from the ILEC central office, thus substantially delaying CLECs' ability to enter markets. At the same time, however, allowing collocation of multifunction and stand-alone telecommunications equipment would increase the occupation of

⁸⁸ *In re Trans Alaska Pipeline Rate Cases*, 436 U.S. 631, 653 (1978) (ICC deemed to possess broad powers to prescribe just and reasonable and nondiscriminatory terms and conditions of transportation); *See also Chesapeake and Ohio R.R. Co. v. ICC*, 426 U.S. 500, 512-515 (1976) (upholding ICC decision requiring railroad to incur certain maintenance expenses as a condition of ICC approval of proposed rate increase).

ILEC central offices marginally, if at all. Many CLECs have already built and paid for collocation space, usually at exorbitant prices which makes it among the most expensive real estate in the country. Simply stated, therefore, it is reasonable to permit CLECs to collocate multifunction equipment because it would greatly facilitate their ability to compete and would not have any significant impact on ILECs.

D. ILECs Must Be Required to Permit CLECs to Self-Provision Cross-Connection Between Collocators in ILEC Central Offices

The Commission should interpret the 251(c)(6) requirement that ILECs' provide physical collocation of equipment "necessary for interconnection . . . at the premises of the local exchange carrier" to include interconnection with other CLECs' networks as well as the ILECs' network provided the other CLECs have interconnection points at the premises of the local exchange carrier. Under the literal definition of Section 251(c)(6), cross-connection is "interconnection . . . at the premises of the local exchange carrier."

ILECs will doubtless argue that Section 251(c)(6) provides *only* for collocation of equipment that interconnects to the *ILEC's* network. There is, however, nothing in the language of the statute, its procompetitive purpose, or its legislative history that supports that distinction. By its terms, Section 251(a) requires all carriers -- including CLECs -- to interconnect with other carriers. Moreover, section 251(c)(6) requires any conditions imposed on interconnection to be nondiscriminatory. Denial of cross-connection would violate the requirement that ILECs provide collocation on a nondiscriminatory basis, because ILECs can and typically do connect with a collocating CLEC at the ILEC's central office, but another CLEC could not. Of particular concern is that the inability to directly cross-connect with other co-located CLECs would

effectively thwart CLEC advanced optical networking initiatives that use dark fiber capacity leased from other carriers because adequate optical cross-connect services from ILECs are either unavailable and/or would degrade the quality of service that CLECs are able to provide in comparison to direct cross-connection between CLECs.

Use of ILEC hardware to intermediate optical cross-connection also raises equipment compatibility issues that will further limit technology choice and likely decrease a CLEC's ability to deploy the most modern and advanced solutions available today. Use of ILEC hardware also reduces circuit reliability because additional electronic hardware will be placed in the circuit. In contrast, direct self-provisioned cross-connection between CLECs does not raise any of these issues. At the same time, permitting CLECs to self-provision cross-connection in ILEC central offices will not increase occupation of ILEC premises at all, or impose any other burdens on ILECs. In many cases, cabling can be run between adjacent collocation cages or equipment racks. In other situations where cabling must be run for any distance between CLECs' collocation space it is not likely that this would increase any burdens on ILECs because central offices by their very nature are set up for running cabling and performing interconnection. In any event, to the extent necessary the Commission could establish reasonable limits on the extent to which CLECs may self-provision cross-connection such as requiring that only technically qualified personnel perform this work.

E. The Commission Should Reestablish Reasonable Terms And Conditions To Facilitate Use of Collocation Space.

The Commission can take several steps to help assure parity of access to ILEC central offices in accordance with the requirement that ILECs provide nondiscriminatory physical collocation. The Commission can start by re-adopting the collocation requirements in ¶ 42 of the

Collocation Order, which the court vacated based on its finding that the Commission had provided insufficient justification for such requirements under the statute. First, the Commission should reinstate the requirement that CLECs be permitted to collocate in any unused space in the incumbent LEC premises. *Id.* Joint Commenters do not believe that the Commission intended -- in originally imposing this requirement -- to authorize CLECs arbitrarily to collocate equipment at their whim. To dispel this impression, the Commission should clarify that such a requirement is intended to prevent the *incumbent LEC* from unilaterally placing arbitrary restrictions that would prevent collocation of CLEC equipment while preserving the space for future use by the incumbent. The Commission could further clarify this requirement so as to allow the incumbent LEC to place just and reasonable restrictions on the use of space for collocation. However, if the ILEC wishes to place such restrictions, the incumbent LEC should be required to subject itself to the same restrictions.

Second, the Commission should reinstate its prohibition on the incumbent LEC unilaterally imposing an arbitrary or unreasonable restrictions on collocation, such as segregation of CLEC equipment in separate rooms, cages or floors, separate entrances or the designation of separate intermediate connection points.⁸⁹ Such separation requirements create clear barriers to entry not faced by the incumbent, reducing the total space available to CLECs, while leaving the incumbent LEC free to locate its equipment anywhere.⁹⁰ Requiring CLECs to construct separate

⁸⁹ ILECs frequently justify separate room/isolated space requirement based on security concerns. However, the cost of resolving security concerns should not be placed solely at the feet of the CLECs, but should also be shared by the incumbent LECs. Moreover, State commissions have found less restrictive ways to address the purported ILEC security concerns, such as security cameras, monitoring systems, or badges. *See* Massachusetts D.T.E. 98-57, Order on Investigation by Department on Own Motion (March 24, 2000).

⁹⁰ For instance, in New York, Bell Atlantic unilaterally imposed a requirement that CLECs place their equipment in a separate lineup at least 10 feet away from working BA-NY equipment. CLECs argued that this rule limits the amount of space available, increases costs and may force CLECs to collocate in a separate room. The NY PSC

entrances, leaving ILECs free to use existing entrances, increases costs for CLECs while immunizing ILECs from such costs. Arbitrary designations of intermediate points of interconnection in lieu of direct connection violates the obligation of incumbent LECs to provide interconnection at any technically feasible point within the carrier's network.⁹¹ Moreover, unless justified by technical, operational, safety, engineering or security considerations, such requirement places the CLEC at a competitive disadvantage with the incumbent LEC, thus violating the incumbent's obligation to offer interconnection at just and reasonable and nondiscriminatory terms and conditions.

F. The Commission Should Establish Minimum Provisioning Intervals for the Full Range of Collocation Arrangements.

The FCC has also requested comment on: (1) whether it should reduce the maximum provisioning interval for physical collocation arrangements to a number shorter than 90 days; and (2) whether it should establish separate minimum installation intervals for various types of collocation.

Joint Commenters applaud the decision of the Commission to adopt a maximum provisioning interval for physical collocation of 90 days. Joint Commenters believe, however, that as the incumbent LECs have gained more experience with collocating CLEC equipment, and in installing equipment used to provide advanced services both for the incumbent LEC itself and its tenant CLECs, shorter intervals have become appropriate. As the Commission recognizes in its *NPRM*, the timely provisioning of collocation space is essential to the CLECs' ability to compete effectively in the markets for advanced services and other telecommunications

agreed and disallowed this practice. See Case 990C-0715, *New York Telephone Company Case* 1999 WL 1054136 at *2 (NYPSC).

⁹¹ See 47 U.S.C. § 251(c)(2)(B).

services.⁹² A delay in the deployment of collocation space causes significant competitive injury to a CLEC in a number of ways. If a CLEC's collocation space is not available in a timely manner, the CLEC will likely be forced to delay service to new markets and perhaps to signed customers as well. If these customers have not developed significant affinity for the CLEC, they may become frustrated with the delays and decide to take service from one of the CLEC's competitors, including the ILEC.

The anticompetitive impacts of extended collocation intervals are not limited to caged physical collocation. Accordingly, Joint Commenters recommend that the Commission limit application of the 90-day provisioning interval adopted in the *Order* to caged collocation. The Commission's standards for cageless and virtual collocation, as well as collocation within remote structures, should specify 60 days as the maximum provisioning interval, as these forms of collocation can reasonably be provisioned within a 60-day period. Modifications to existing collocation arrangements, such as expansion of cages, additions to cageless arrangements, and additional power outlets, should be provisioned within 30 days.⁹³ The states have generally recognized that the work required for an ILEC to provision caged collocation is much more extensive than the work required to provision other forms of collocation, and thus that shorter intervals are appropriate in the latter case. For example, Florida has established 60 days as the provisioning interval for virtual collocation under "ordinary conditions."⁹⁴ Texas allows 55 days for the provisioning of cageless collocation in active collocation space when the CLEC installs

⁹² *Order* at ¶ 17.

⁹³ See Docket No. 22168, *Petition of Covad Communications Co. and Rhythms Link, Inc. Against Southwestern Bell Telephone Co. and GTE Southwest Inc., etc.*, Interim Award, at 25.

⁹⁴ See Order No. PSC-96-1579-FOF-TP, issued Dec 31, 1996, at 102.

its own bays.⁹⁵ Texas has also set intervals for modifications to existing physical collocation space. The interval set for provisioning many of the modifications specified is 30 days or less.⁹⁶

In adopting national standards for provisioning intervals, the Commission should make clear that these standards are a ceiling and not a floor. As demonstrated by the record in this proceeding and the discussion herein, the states have provided – and should continue to provide – important guidance in determining what provisioning intervals are appropriate and necessary to facilitate effective competitive entry. Thus, the states should have the flexibility to respond to specific issues by mandating shorter provisioning intervals for the ILECs. Should an ILEC meet a state-established provisioning interval that is shorter than the national standard, such action should give rise to a rebuttable presumption that the provisioning interval is technically feasible in any state served by that ILEC. This approach is consistent with the “best practices” rule adopted by the Commission in its *Advanced Services First Report and Order*⁹⁷ and is already being followed by some states.⁹⁸ Similarly, the Commission should hold that if an ILEC provides more expeditious collocation to an affiliate, subsidiary, or strategic partner, such shorter interval must become the standard for competitive requesting carriers.

III. COLLOCATION AT REMOTE TERMINALS

A. Collocation At Remote Terminals of Line Cards, DSLAMS, and other

⁹⁵ See Texas PUC Order No. 51, Project 16251 at 1.

⁹⁶ *Id.* at 3-5.

⁹⁷ *Advanced Services First Report and Order* at ¶45.

⁹⁸ For example, Connecticut has imposed on Southern New England Telephone Company the same provisioning intervals adopted by Texas for SWBT. See Application of the Southern New England Telephone Company for Approval of a Tariff for Collocation, Docket No. 99-08-05, Connecticut Dept. of Public Utility Control, March 9, 2000, at 56.

Equipment Is Necessary for Interconnection and Access to UNEs.

As the use of fiber based DLC systems becomes more ubiquitous, as a result of the accelerating growth in the provision of advanced services, remote terminals are fast becoming the equivalent of the central office.⁹⁹ The Commission has already recognized the status of remote terminals as essential aggregation points for access to loops and other essential network facilities.¹⁰⁰ Incumbent LECs must be therefore required to provide CLECs the same access to remote terminals as they have today to central offices, opening access to an increasingly clear-cut bottleneck facility.

The critical role of the remote terminal in facilitating the provision of advanced telecommunications services cannot be overstated. Traditionally, with first generation xDSL technology, it was assumed that the customer must reside within 18,000 feet of the Digital Subscriber Line Access Multiplexer ("DSLAM") to receive reliable xDSL service. However, placing next generation DLC or IDLC equipment in forward-deployed remote terminals overcomes this operational roadblock, allowing local exchange companies to push deeper into its neighborhoods and install or upgrade neighborhood broadband gateways containing digital electronics. Thus, for example, SBC is on record with respect to its Project Pronto initiative for its claim that:

SBC has two primary goals: to bring advanced broadband data services to nearly all customers, and to integrate its voice and data networks to more efficiently and effectively transport that traffic. That more than \$6 billion Project Pronto initiative should make these goals a reality. The strategy includes plans to:

Install fiber optics deeper into neighborhood networks and install or upgrade approximately 25,000 neighborhood broadband gateways containing *next*

⁹⁹ See *UNE Remand Order* at 218.

¹⁰⁰ *Id.*

generation digital loop carriers. These neighborhood gateways will expand the reach of DSL service by taking the capabilities of the network closer than ever before to customers.¹⁰¹

The strategic assumptions underlying SBC plans have been widely recognized (and emulated) by others in the incumbent LEC industry. In a recent public forum on *Competitive Access to Next-Generation Remote Terminals* held at the FCC on May 10, 2000, senior executives from three of the largest regional Bell Operating companies, together with representatives of major switch manufacturers and competitive local exchange companies all *agreed* in touting the advantages of next generation remote terminals in providing advanced services. Several of the incumbent LEC representatives spoke at length concerning their *current* plans to deploy next generation DLC as an integral part of their independent plans to push fiber deeper into neighborhoods to offer DSL service. Notably, Mr. Masters of SBC expanded on the company's previous boasts made on behalf of Project Pronto, stating that:

we have a very large initiative going on to try to put a lot more remote terminals in our network. . . . We said earlier we have about 35,000 remote terminals, and they were adding another roughly 13,000. *We're upgrading 7-10,000 of existing ones to provide a broadband service, next generation DSL, and actually a broadband capability to the network bay.*¹⁰²

Mr. McNamara of BellSouth echoed this sentiment, stating that “*all* of our growth today is going on next generation products. We aren't deploying *any* old technology to DLC any more. It is all next generation products with copper feeder.”¹⁰³

B. ILECs Must Have An Absolute Obligation to Provide Sufficient Collocation

¹⁰¹ *Project Pronto: SBC's Network Vision and Strategy* (emphasis added).

¹⁰² Tr. 12 (emphasis added).

¹⁰³ *Id.* at 14 (emphasis added).

Space at Remote Terminals.

In these circumstances, the FCC should adopt regulations to ensure that incumbent LECs have no less an obligation to provide collocation at remote terminals – on just and reasonable and nondiscriminatory terms and conditions – as they do at central offices.

First, nowhere in Section 251 (c)(6) of the Act is there any suggestion that the duty to provide physical collocation of equipment necessary for interconnection or access to unbundled network elements,"¹⁰⁴ is limited to central offices. As incumbent LECs move to deploy many central office functions to remote terminals, collocation at the remote terminal becomes increasing necessary to achieve interconnection and meaningful access to UNEs. To the extent that any service – that is provided by an incumbent LEC – *cannot* be provided by the CLEC without collocation at the remote terminal, the incumbent LEC must be obligated to provide such collocation. Otherwise, the incumbent LEC cannot possibly satisfy its obligation to provide nondiscriminatory interconnection that is at least equal in quality to that provided . . . to itself"¹⁰⁵ Nor can it satisfy its obligation to provide access to UNEs on just and reasonable and nondiscriminatory terms and conditions.¹⁰⁶

Without the ability to collocate DSLAMs, line cards and other equipment at remote terminals, CLECs are essentially denied interconnection with incumbent LEC DLC equipment and access to the feeder subloop, thereby limiting xDSL service by CLECs to customers served by spare, home-run copper loops shorter than 18,000 feet. That the incumbent LECs have used

¹⁰⁴ 47 U.S.C. § 251(c)(6).

¹⁰⁵ 47 U.S.C. § 251(c)(2)(C).

¹⁰⁶ 47 U.S.C. § 251(c)(3).

the remote terminal as an obstacle to competition cannot be denied. For example, Verizon has contended in a number of proceedings in its region that it need not allow data CLECs to engage in line sharing over DLC loops, contending that, by definition, line sharing can only be done over home-run copper.¹⁰⁷ In its *Project Pronto Order*, the Commission made clear the need to allow collocation at remote, accepting, for the time being, SBC's commitment to make available collocation space at Huts, Controlled Environment Vaults and Cabinets, in addition to establishing a process for special construction arrangements.¹⁰⁸ In adopting this condition, the Commission stated that: "Facilitating competitive access to remote terminals enables unaffiliated carriers to deploy equipment used to provide different types of DSL service, and thereby mitigates the incentive and ability of SBC's incumbent LECs to stifle innovation."¹⁰⁹

The Commission should therefore state unequivocally that the obligation of incumbent LECs to provide physical collocation does not end at the Central Office. The Commission should also require that ILECs reserve, at a minimum, 50% of available physical collocation space in remote premises (i.e., remote terminals, CEVs, cabinets and huts that house ILEC equipment) for use by CLECs to physically collocate their equipment. Where equipment is not capable of being physically collocated within same remote premises due to interference or size restrictions, the Commission should require that adjacent collocation arrangements be made available on *ILEC* controlled premises and CLECs should automatically be granted easements or access to same rights of way available to ILECs, subject to the same terms and conditions available to incumbent LECs, including taxes, permit charges and any other local regulation.

¹⁰⁷ See D.T.E. 98-57-Phase III, Massachusetts DTE Order, mimeo, at 80-87 (September 29, 2000).

¹⁰⁸ *Project Pronto Order* at ¶ 34.

Finally, the Commission should adopt measures to ensure that incumbent LECs do not adopt a “divide and conquer” strategy whereby CLECs are disabled from achieving geographic contiguity in collocating at remote terminals. Many CLECs attempt to maximize expenditures on marketing their services concentrate in discrete geographic areas served by a particular set or subset of remote terminals. Incumbent LECs should not be allowed to disrupt such business plans by adopting space utilization priorities at remote terminals that prevent CLECs from grouping their collocation in clusters of remote terminals.

C. Disclosure of Remote Terminal Information Should be Required.

The same pre-application information as to space availability is needed for remote terminals as for central offices. CLECs, particularly those providing advanced services, need to know if there is collocation space available at the remote terminal.

When a CLEC makes a request of an incumbent LEC for collocation space at a remote terminal, the incumbent LEC should, within 10 calendar days, provide it with schematic drawings of the remote terminal itself and all adjacent space, as well as information concerning: (1) the amount of collocation space available, and dimensions of any discrete blocks of space; (2) separate identification, through color coding or similar scheme, of the space occupied by the incumbent LEC, by type of equipment; (3) the number of other collocators and space they occupy; (4) any modifications or augments to the space since the last report; and (5) plans on the part of the incumbent to make any additional space available. The Commission should clarify that such information not be provided to CLECs on an incremental, piecemeal RT by RT basis, but rather comprehensively for all RTs in the area in which the CLEC requests such information.

¹⁰⁹ *Id.* at ¶ 34.

In addition, the incumbent LEC should be required to maintain a web site indicating those premises that have no room for collocation.

D. ILECs Should Be Required to Deploy Remote Terminals That Support Interconnection By CLECs.

Finally, as mentioned above, the remote terminal is becoming the new central office. ILECs must not be permitted to artificially constrain interconnection at remote terminals by using equipment that unnecessarily constrains CLECs' ability to do so. Joint Commenters acknowledge that any restriction on the ability of incumbent LECs to select the equipment that best serves its needs is an inconvenience. However, at the same time, some uniformity is necessary to achieve the timely provision of competitive advanced services offerings under the Act. Thus, the incumbent LECs should be required to take steps to ensure that the equipment they deploy to interface with CLEC equipment should be outfitted with universal interfaces and protocols so as to enable efficient interconnection on just and reasonable and nondiscriminatory terms and conditions.

IV. THE COMMISSION'S LOCAL COMPETITION RULES SHOULD ACCOMMODATE NEXT GENERATION NETWORK ARCHITECTURES.

A. Project Pronto and Richardson, Texas Demonstrate the Need For New Local Competition Rules to Govern ILEC Deployment of Next Generation Network Architectures

In the *Collocation Reconsideration Order and NPRM*, the Commission seeks comment on whether the deployment of new architecture and electronics by incumbent local exchange carriers ("ILECs") requires the Commission to revisit its local competition rules, particularly its rules on unbundling. In light of ILECs' deployment of so-called next generation network technologies, the Commission's inquiry could not come at a more crucial time. Indeed, it would

be hard to imagine ILEC network deployments that would more dramatically show the need for revised Commission rules that will assure the CLECs are able to compete in the local telecommunications market. SBC in Project Pronto has proposed network deployments that would permit that incumbent carrier to determine the pace and scope of competition in provision of advanced services. In Richardson, Texas, SBC has virtually foreclosed DSL competition by unilaterally removing copper loops.

Joint Commenters are very concerned that ILECs will extend their monopoly power over local telephony to advanced services by operating and controlling next-generation networks in a manner that ensures that only the ILECs (and their data affiliates) will be able to recognize the full benefits of the architecture.¹¹⁰ To ensure that the full benefits of this new architecture and technology extend to customers of CLECs and ILECs alike, the Commission should revisit its local competition rules to assure that advanced services electronics and capabilities are included the definition of UNEs, establish new UNEs, and require complete disclosure of ILEC network capabilities.

B. The Commission Should Redefine Loop and Transport UNEs to Include Advanced Services Electronics.

A network element is defined under the Act as a facility or equipment used in the provision of a telecommunication service which includes the features, functions, and capabilities

¹¹⁰ *In the Matters of Deployment of Wireline Services Offering Advanced Telecommunications Capability; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Application for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from Ameritech Corporation, Transferor to SBC Communications, Inc., Transferee; Common Carrier Bureau and Office of Technology Announce Public Forum on Competitive Access to Next-Generation Remote Terminals*, CC Docket Nos. 98-147, 96-98, 98-141, and NSD-L-00-48, Reply Comments of AT&T Corp. at p. 12 (July 10, 2000)(“AT&T ALTS Petition Reply Comments”).

that are provided by means of such facility.¹¹¹ The loop was initially defined by the Commission as a transmission facility between a distribution frame, or its equivalent, in an incumbent LEC central office, and the network interface device at the customer premises.¹¹² In its *UNE Remand Order*, the Commission modified its definition of the loop network element to include all features, functions and capabilities of the transmission facilities, including dark fiber and attached electronics (except those used for the provision of advanced services, such as DSLAMs) owned by the incumbent LEC, between an incumbent LEC's central office and the loop demarcation at the customer premises.¹¹³ The Commission has sought to ensure that its definition of the loop will apply to new as well as current technologies.¹¹⁴

The Commission's decision granting SBC's request for waiver of the SBC/Ameritech merger conditions in its *Project Pronto Order*, authorizing the SBC/Ameritech incumbent LEC to own combinations POTS/ADSL plugs/cards located in remote terminals as well as optical concentration devices ("OCDs") located in central offices demonstrates the unworkability of excluding line cards and OCDs from the definition of the loop UNE.¹¹⁵ As explained above, the conditions accepted by SBC as a *quid pro quo* for this waiver should be adopted generically and imposed on all incumbent LECs. The Commission should redefine the loop UNE to include both line cards and OCDs employed as part of DLC systems deployed by ILECs.

¹¹¹ 47 U.S.C. § 153(29).

¹¹² *Local Competition Order*, *supra*, 11 FCC Rcd. at 15499 at ¶ 380.

¹¹³ *UNE Remand Order*, *supra*, at ¶ 167.

¹¹⁴ *Id.*

¹¹⁵ *Project Pronto Order* at ¶ 25.

1. Line Cards.

The Commission should include combination card/plugs within the definition of a loop. By SBC's own definition this equipment is an integrated piece of technology having both POTS and DSLAM capabilities as well as the splitter functionality.¹¹⁶ DLCs, unlike DSLAMs, are not used solely for the provision of advanced services, but are deployed where there are multiple service requirements (*i.e.*, voice and data).¹¹⁷ Thus, the basis for excluding DSLAMs from the definition of the loop is not present with the combination cards. They are integrated, multi-functional equipment that play a vital role in the transmission of non-advanced, as well as advanced, services. The Commission noted in its *UNE Remand Order* that:

[S]ome loops, such as integrated digital loop carrier (IDLC), are equipped with multiplexing devices, without which they cannot be used to provide service to end users. Because excluding such equipment from the definition of the loop would limit the functionality of the loop, we include the attached electronics (with the exception of DSLAMs) within the loop definition.¹¹⁸

Likewise, these integrated cards must be included in the definition of the loop because excluding them would limit the functionality of the loop. The new equipment being produced by vendors today provides integrated functionality such that the line between advanced and non-advanced services is blurred. The Commission should rethink its exclusion of equipment used in the provision of advanced services from the definition of the loop. Such a bright line distinction is no longer tenable given the integrated equipment, and imprecise application of such an approach would truly exclude equipment that is crucial to the functionality of the loop.

¹¹⁶ *SBC Letter* at p. 4.

¹¹⁷ *Alcatel Comments*, p. 2. SBC argues that the cards are not advanced services equipment, and notes the majority of the cards will be used to provide POTS service, at least initially. *SBC Letter* at p. 4; *see also*, SBC Reply Comments at p. 7.

¹¹⁸ *UNE Remand Order* at § 175.

2. OCDs

OCDs, which are essentially ATM switches, separate each CLEC's ATM packetized bitstream from the common ATM packetized bitstream coming from the remote terminals, and hand off the appropriate packetized bitstream to each CLEC and ILEC advanced services affiliate.¹¹⁹ Under SBC's proposed network configuration in Project Pronto, the ATM switches are the only means by which the ADSL-based traffic of multiple CLECs can be aggregated and disaggregated.¹²⁰ The OCD will therefore be the only feasible point at which CLECs can get access to the ATM's bit streams coming from their customers.¹²¹ The Commission should accordingly define the loop UNE as including OCDs where such devices are deployed. This will enable CLECs to access the OCD functionality as part of the loop UNE.

¹¹⁹ CC Docket 98-141, *Ex Parte* Letter from DSL Access Telecommunications Alliance to Carol Matthey at p. 4 (April 11, 2000) (“*DATA Letter*”).

¹²⁰ *Id.* The placement of the OCDs in the central office is an indication of SBC's failure to consider more economical alternatives such as allowing CLECs to access the bitstream at the DLC which would preclude the need for a central-office based ATM switch, including the need for a multiport DLC at the CO, and allow for the deployment of fewer ATM switches. *Id.* This lack of implementing a more cost-effective arrangement in the architecture will surely lead to higher proposed cost-recovery from SBC for use of this functionality. *Id.*

¹²¹ *Id.*

C. CLECS Must Be Permitted to Deploy Their Own Line Cards

The plug/cards in the Project Pronto system are multi-functional, *i.e.*, they provide DSL functionality, DSLAM functionality, and splitter functionality.¹²² SBC describes the combination card/plug as an integrated piece of technology having both POTS and DSLAM capabilities as well as the splitter functionality.¹²³ These cards are vital because SBC has indicated that collocation space at its remote terminals is scarce and will likely prohibit the collocation of DSLAMs within most remote terminals.¹²⁴ Thus, lack of collocation space at remote terminals will limit the ability of CLECs to collocate their own stand-alone DSLAMs at the remote terminals.¹²⁵ As observed by the FCC in its *Project Pronto Order*, these plug-in cards provide a way around this problem.¹²⁶ The line cards provide an efficient, convenient and less capital intensive means for the CLEC to access the subloop.¹²⁷

The problem is that the particular line cards utilized by SBC, and made by Alcatel USA, limit the types of xDSL service a carrier may provide. For instance, the line cards would not

¹²² *Petition of Covad Communications Company for an Arbitration Award Against Bell Atlantic Pennsylvania, Inc., Implementing the Line Sharing Unbundled Network Element; Petition of Rhythms Links, Inc. for an Expedited Arbitration Award Implementing Line Sharing*, PA PUC Docket Nos. A-310696F0002 and A-310698F0002, Recommended Decision at p. 36 (June 28, 2000)(“PA ALJ Ruling”).

¹²³ CC Docket No. 98-141, Letter from Paul K. Mancini, SBC Vice President and Assistant General Counsel to Lawrence Strickling, Common Carrier Bureau at p. 4 (February 15, 2000)(“SBC Letter”).

¹²⁴ *Project Pronto Order* at ¶ 35 (approving SBC offer to allow collocation at huts, vaults and cabinets where available); *In the Matter of SBC Communications, Inc., et al., for Provision of In-Region InterLATA Services in Texas*, CC Docket No. 00-65, Supplemental Comments of AT&T Corp. at p. 24 (April 26, 2000); *Response to SBC’s Requests for Interpretation, Waiver or Suspension of Merger Conditions Affecting the Ownership of Plugs/Cards and OCDs*, CC Docket 98-141, *Ex Parte* Letter from DSL Access Telecommunications Alliance to Carol Matthey at p. 3 (April 11, 2000)(“DATA Letter”).

¹²⁵ CC Docket 98-141, Comments of Alcatel USA at p. 4 (March 2, 2000); *SBC Letter* at p. 2.

¹²⁶ *Project Pronto Order* at ¶¶ 30-32.

¹²⁷ *SBC Letter* at p. 3.

support SDSL service.¹²⁸ For CLECs desiring to provide other xDSL services, other than those Alcatel's equipment supports, Alcatel suggests that these carriers deploy their own DSLAMs.¹²⁹ This is not a viable option for CLECs, however, given the lack of collocation space in many SBC remote terminals, and the fact that the level of concentration present at a particular remote terminal may not justify the cost of collocation.¹³⁰ One solution to this problem would be to allow CLECs to provide their own line cards tailored to the particular class of service they seek to offer and to have SBC install said line cards. SBC has rejected this option. SBC has argued that it is under no legal obligation to allow CLECs to reconfigure their equipment and it also argues that this option is technically infeasible.¹³¹ Thus, CLECs are limited in the provision of their xDSL services to the type of service that is supported by the incumbent LEC's line cards. Equally troubling is SBC's position that at any time it may transfer the line cards to its Advanced Service affiliate, and that the obligations that would travel to the affiliate with such equipment would be evaluated on a case-by-case basis.

In order to address these issues, CLECs must be permitted to provision cards, both at remote terminals and in the central office, that would support the types of services they wish to offer. The Illinois Commerce Commission recently required:

¹²⁸ CC Docket 98-141, Reply Comments of Alcatel USA at p. 2 (March 10, 2000)(*"Alcatel Reply Comments"*).

¹²⁹ *Id.*

¹³⁰ *Petitions of Covad Communications Company and Rhythms Links, Inc. for Arbitration Pursuant to Section 252(b) of the Telecommunications Act of 1996 to Establish an Amendment for Line Sharing to the Interconnection Agreement with Illinois Bell Telephone Company d/b/a Ameritech Illinois, and for an Expedited Arbitration on Certain Core Issues*, Illinois Commerce Commission Docket Nos. 00-0312 and 00-0313, Arbitration Decision at p. 29 (August 17, 2000)(*"Illinois Line Sharing Order"*).

¹³¹ CC Docket 98-141, Reply Comments of SBC Communications, Inc. In Support of a Determination that SBC Incumbent LECs May Own Combination Plug/Cards and Optical Concentration Devices at p. 15 (March 10, 2000)(*"SBC Reply Comments"*). Ironically, one of the initial proposals SBC considered making to the Commission was to allow CLECs to own their cards and SBC would install the cards. *SBC Letter* at p. 3.

Ameritech to install plug-in cards which support all DSL-based services requested by the CLECs. If Covad's or Rhythms' business plan calls for a particular DSL service that requires a plug-in card that Ameritech does not provide itself, the burden of proof will lie with Ameritech to prove that the plug-in card is incompatible with Project Pronto technology.

This Commission should go a step further and permit CLECs to provision their own line cards in order to permit CLECs to access the full functionality and capability of the loops they purchase.

D. The Commission Should Designate New UNEs.

1. DWDM Wavelengths

Dense wave division multiplexing (DWDM) technology, multiplies the capacity of an optical fiber by simultaneously operating at more than one wavelength, thereby allowing multiple information streams to be transmitted simultaneously over the fiber. This is an expensive option, but it gives a carrier growing capacity and intelligent provisioning of bandwidth, and is perhaps the best long-term strategy for promoting capacity in a network. Verizon is using this technology in its large metropolitan areas and such technology may help promote its fiber-to-the-curb deployments.

The effect of such technology on the loop could be revolutionary. The technology will allow network carriers to sell or lease the individual streams of light in fiber-optic networks that transport voice, video, or image traffic. Customers, such as ISPs, will be able to purchase only the network bandwidth they want, when they want it. It will provide carriers with new revenue streams and allow companies to boost sales by packaging wavelengths with Internet services and lift efficiency by leasing or trading network bandwidth as needed.

The Commission should require ILECs to offer optical wavelengths as separate UNEs. In line sharing, the Commission already has already take this approach in unbundling the high frequency portion of copper loops. Just as the frequency of a loop is part of its capability, so too is the wavelength. Carriers should be allowed to access unbundled loop functionalities such as wavelength, separate from other loop functions, or to access, at their option, the entire unbundled loop facility. In this way, a carrier who only desired a particular wavelength could purchase that particular wavelength. If a carrier wanted to access all wavelengths of the loop, it could purchase the entire loop and have exclusive use of the facility. The Commission could utilize a similar approach in regard to the DWDM electronics that it uses in regard to line splitters, *i.e.*, allowing the ILEC to install and maintain the electronics unless such control is inhibiting the CLEC's provisioning of services it seeks to provide.

2. Constant Bit Rate Class of Service

Constant Bit Rate ("CBR") is a data service where the bits are conveyed regularly in time and at a constant rate, *i.e.*, following a timing source or clock just as members of a marching band follow the beat of the drummer. CBR technology could be the basis for current high-speed access solutions because it allows carriers to provide a full array of services. This service is especially important in regard to sending uncompressed voice and video traffic because they are sensitive to variable delay, thus, they have to be transported without any interruptions in the flow of data. As data transmission becomes more multimedia, *i.e.*, voice over ATM or IP and videoconferencing, quality of service ("Amos") issues arise. These media are extremely bandwidth and delay sensitive, and unless packets are capable of being delivered in a real-time, orderly and timely manner, the quality of service is greatly affected. Electronics that provide for

CBR dos address these problems subject to issues of spectral incompatibility and interference that may lead to service degradation problems.

In connection with Project Pronto, CLECs have requested that SBC provide CBR class of service because it would provide a guaranteed bandwidth without queuing delays or discards. SBC's initial position was that it could only provide unspecified bit rate ("UBR") service. UBR service will not permit CLECs to provide the full range of DSL services that they are currently providing and would also preclude future DSL services such as SDSL. SBC eventually agreed to provide such service. CBR service would thus avoid the technical limitations imposed by an ILEC's choice of a particular technology that could otherwise limit CLECs to a particular service, such as SBC's initial proposal to limit CLECs to providing ADSL over its NGDLC architecture. Accordingly, the Commission should designate CBR as a UNE.

2. The Broadband UNE

Finally, the Commission should establish a fiber loop UNE product that would provide a CLEC with use of an integrated loop facility. Joint Commenters propose that this product offering be an extension SBC's Broadband Service Offering as described in the Commission's *Project Pronto Order*. In that offering, SBC offers access to a:

the OCD in the central office . . . In this way, a carrier will receive access to a "port" on the OCD, which is then used to establish a "permanent virtual connection." Using this access to the OCD, a carrier will be able to connect thousands of customers served by plug-in cards installed in NGDLC systems (in this case the ADLU Cards) to its advanced services network.¹³²

This product offering, as modified and broadened as discussed above, should be deemed to be a unbundled network element offered in accord with Sections 251 and 252 of the Act, and

¹³² *Project Pronto Order* at ¶ 31.

particularly that such product offering be offered at forward-looking costs. This product offering should be updated and extended in light of the issues raised above in regard to particular components of the NGDLC architecture and new technologies. In addition, the product offering should be allowed to evolve and adapt to reflect different NGDLC architectures and new product developments. The product offering should provide for deployment of equipment that gives CLEC full access to the existing features and functionality of the facility as well as future features and functionality.

E. ILECs Should Be Required to Disclose Fiber Deployment Plans and the Full Technical Capabilities Next Generation Network Architectures

As discussed, the Commission has already determined that ILECs must offer as part of UNEs the full functions and capabilities of network elements. Joint Commenters have requested that the Commission specify that certain capabilities are part of the loop UNE and/or be designated as UNEs. However, CLECs are disadvantaged in their ability to request advanced capabilities of next generation network architectures because ILECs and their vendors have not fully disclosed the capabilities of the equipment they plan to deploy. SBC's proposal to post on its website technical information from its vendor is not likely to be adequate. Joint Commenters have carefully reviewed information posted by Alcatel on its website and this provides little information about the capabilities of this equipment other than what is useful for marketing purposes. Moreover, current network disclosure rules are inadequate for revealing the capabilities inherent in advanced network equipment because those rules only require ILECs to disclose network changes that could affect interoperability. While that disclosure is essential, it only reveals the equipment capabilities that the ILEC has chosen to activate.

Instead, the Commission should require that ILECs fully disclose the capabilities of all deployed equipment, including unactivated capabilities. To the extent vendor proprietary information is involved, the Commission may require that ILECs disclose this information subject to appropriate nondisclosure agreements.

V. COPPER LOOPS MUST BE MAINTAINED

The Commission seeks comment on the impact the deployment of NGDLC will have on copper facilities, *i.e.*, when the NGDLC is deployed as an overlay of existing copper facilities what will happen to these copper facilities. The Commission needs to ensure that these copper facilities are maintained in such a manner that they provide a viable alternate source of CLEC access to customers. The importance of these facilities has been by no means lessened by the NGDLC architecture, and in some cases, their importance has heightened, particularly to those CLECs whose business plans are focused on the use of copper facilities.

One of the main reasons this Commission unbundled the subloop element was to facilitate CLEC access to customers in an IDLC environment. While technology has provided more ways for CLECs to access IDLC customers as shown above, ILEC deployment of the NGDLC architecture, and the restrictions they have imposed, ensure that CLECs will still have difficulties accessing their customers under the NGDLC architecture. Maintaining existing copper facilities in the subloop will give CLECs more options in providing such access.

As discussed above, the lack of collocation space for CLEC DSLAMs in many NGDLC remote terminals coupled with interoperability issues with line cards could effectively preclude a CLEC's ability to access their customers much less provide the services they seek to offer to their customers. The ILECs and their vendors have trumpeted the continued availability of

copper facilities as a solution. For copper to remain a viable alternative to the CLECs, the spare copper facilities need to be maintained.

The concerns of CLECs over their ability to access customers in the NGDLC environment have been well-documented in Docket 98-141 and other dockets. These are not idle concerns. In Richardson, Texas, SBC deployed fiber-to-the-curb technology that effectively precluded CLEC provision of advanced telecommunication services including xDSL services. SBC coupled its fiber-to-the-curb deployment with elimination of most of the copper infrastructure in that network segment. CLECs collocated at the Richardson, Texas central office were left with “little if any access to copper loop UNEs for the provision of xDSL service.” This precipitous removal of copper facilities rendered the expensive collocation arrangements CLECs made in Richardson, Texas useless, and precluded their ability to provide advanced services. This example illustrates in a nutshell how allowing ILECs unilateral, unfettered control over facility deployment could lead to the stunting of competition.

In addition to the CLEC access issues, the continued use of copper facilities will be beneficial from a network perspective basis as well. Copper remains the most economical medium for the distribution portion of the loop, particularly given the high cost of fiber-to-the-curb technology. In addition, many of the technological advancements described in regard to fiber technology are occurring with copper as well. ILECs recognize the huge investment they have made in the copper infrastructure and are looking to develop their fiber networks while at the same time getting more out of copper pairs. Thus, for the near future, at least, copper and fiber will co-exist on ILEC networks.

This consensus is reflected in the “voluntary commitment” made by SBC in regard to spare copper facilities. SBC has stated that it will 1) refrain from retiring any copper pairs for

one year 2) will refrain from retiring (over a three year period) more than 5 percent of the copper pairs terminated on the Main Distribution Frames in its LEC central offices; 3) disclose the incumbent LEC's criteria for retiring any copper plant; 4) notify CLECs of its intent to retire any copper plant at least 180 days in advance; 5) provide CLECs an opportunity to purchase any copper plant marked for retirement at net book value, or the highest bid, whichever is higher.¹³³

This proposal should be modified and made mandatory for all ILECs. In particular, ILECs should be required to maintain copper facilities for at least ten years. CLECs need that time horizon to "in order to adequately, finance, and implement business plans." In addition, the ILEC should be precluded from focusing its retirement in particular central office(s) such that they could effectively retire the copper loops in an entire area. Otherwise the ILEC could target its retirement plans to areas in which competition is thriving, thereby thwarting such competition, and promoting the interests of its affiliate.

VI. THE COMMISSION SHOULD MODIFY ITS COLLOCATION RULES TO FACILITATE LINE SHARING AND LINE SPLITTING.

A. Splitter Collocation

When promulgating its rules on line sharing, the Commission operated under the premise that the ILECs would desire to maintain control over the splitter functionality. Such control presupposes that ILECs would own the splitter and provide the splitter functionality to the CLEC.¹³⁴ ILECs, however, have been asserting that they have no obligation to provide CLECs

¹³³ *Project Pronto Order* at ¶ 39.

¹³⁴ *Line Sharing Order* at ¶ 76.

with splitter functionality,¹³⁵ and that their current offerings of splitter functionality are purely “voluntary.”¹³⁶ For those CLECs utilizing line sharing who desire not to have their access to high frequency portion of the loop subject to the whims of the ILECs and their “voluntary” offerings, ownership of the splitter will be the only feasible option. Thus, their ability to collocate the splitters will become a very central aspect of their ability to line share. For this reason, this Commission needs to specify line-sharing specific collocation rules that will ensure that CLECs will be able to collocate equipment, including the splitter, that will give the CLEC access to the full features, functions, and capabilities of the high-frequency portion of the loop.

The splitter plays an essential role in the ability of a line-sharing CLEC to access the high frequency portion of the loop. The capability to provide both voice and data traffic over the loop has necessitated that, at least for the time being, that the voice and data transmissions be “split” with the voice traffic being directed to the circuit-switched network and data traffic being directed to the packet-switched network.¹³⁷ Thus, where a line carries both POTS and data channels, the carrier must separate these two streams.¹³⁸ This is done through use of the splitter which separates the high frequency, xDSL signals, from low frequency (voiceband) analog signals.¹³⁹ The DSLAM then routes the traffic to the particular network.¹⁴⁰ Without the splitter

¹³⁵ Mass. DTE 98-57-Phase III Order at 26-34.

¹³⁶ *Illinois Line Sharing Order* at p. 6.

¹³⁷ *Line Sharing Order* at ¶ 8. In the future, it is anticipated that voice traffic will be migrate to a packet-switched network.

¹³⁸ *Line Sharing Order* at ¶ 9.

¹³⁹ *Id.*

¹⁴⁰ *Id.* In some cases, the splitter and DSLAM are integrated in the same equipment.

functionality, there would be no way for the line sharing CLEC to access the traffic. Thus, as a threshold matter, the equipment that provides the splitter functionality is “necessary” for access to the line sharing UNE and, thus, allowed to be collocated under Section 251(c)(6).

The Commission must, however, not limit itself to simply stating that a carrier should be allowed to collocate equipment with a splitter functionality in the remote terminal and/or central office. The Commission should implement collocation rules that will give CLECs flexibility in regard to what types of equipment they may collocate and where this equipment may be located. Such rules are needed to give CLECs access to the full “features, functions and capabilities” of the high-frequency portion of the loop on a competitive parity basis with the ILEC and/or its advanced services affiliate.

B. Multi-functional Equipment

As demonstrated throughout these Comments, telecommunications equipment is becoming much more integrated. The Commission has already noted that today’s equipment is capable of integrating the splitter and DSLAM functionality. Cards are being developed that will combine the DSL functionality, DSLAM functionality, and splitter functionality.¹⁴¹ The Commission, when defining its collocation rules in regard to line sharing, must establish rules that encompass technological developments in equipment.

The Commission has determined that it should not mandate a particular technological approach to the use of a line for multiple services.¹⁴² The Commission has also held that when the ILEC maintains control of the splitter, it must promptly accommodate, “in response to a competitive CLEC request to do so, any line sharing technology that meets the deployment

¹⁴¹ *PA ALJ Line Sharing Order* at p. 36.

criteria established in this proceeding.”¹⁴³ Thus, CLECs should be given flexibility to collocate equipment for line sharing as long as that equipment is utilized for the purposes of accessing the “functions, features, and capabilities” of the high-frequency portion of the loop and meets the deployment criteria in this proceeding.

C. Location of Equipment

CLECs need to be given a flexible menu of configurations for the location of the splitter equipment. Specifically, ILECs should be required to provide the following menu of configurations: (1) an ILEC owned splitter located on the main distribution frame (“MDF”); (2) an ILEC or CLEC owned splitter located as close to the DS0 terminations or the MDF as possible; and (3) a CLEC-owned splitter in the CLEC’s physical collocation arrangement. CLECs have been experiencing difficulty getting flexibility in the configuration options.¹⁴⁴ In particular, CLECs have been experiencing difficulty in locating the splitter at, or near, the main distribution frame.

This Commission has recognized the importance of having splitters near the main distribution frame to prevent signal attenuation.¹⁴⁵ Unless CLECs are allowed to have the splitter at or near the MDF, they incur needless costs for extra cross-connects and tie cables. For instance, locating the splitter at or near the MDF would only require the use of two cross-

¹⁴² *Line Sharing Order* at ¶ 26.

¹⁴³ *Id.* at ¶ 77.

¹⁴⁴ For instance, Verizon refuses to own the splitter. *See PA ALJ Order* at p. 20. Ameritech also declines to own the splitter and will only offer a CLEC owned splitter to be located in either the CLEC’s physical collocation arrangement or in a common area which is frequently not near the DS0 terminations or the frame. *IL Line Sharing Order* at p. 7.

¹⁴⁵ The further the splitter is from the MDF, the more likely the signal will experience some attenuation. *Line*

connects and one tie cable.¹⁴⁶ The configurations offered by ILECs would require the use of many more cross-connects and tie cables.¹⁴⁷ This unnecessarily inflates the costs CLECs must incur to utilize splitter functionality, particularly when the ILEC refuses to provide the splitter. The inefficient configurations also heighten the risk of service failures attendant with use of excessive tie cables and cross-connects.¹⁴⁸ Finally, the inefficient ILEC configurations increases the length of cable that carries the DSL signal from a customer's premises to a CLEC's DSLAM. In certain multi-storied COs, if the splitter configuration added 500 to 1,000 feet to the overall length of the cable, it may preclude the CLECs ability to offer xDSL service to some customers served by that CO since DSL is a distance sensitive technology.¹⁴⁹

These ILEC-proposed configurations for the splitter disadvantage the CLEC vis-à-vis the ILEC, or its affiliate, in that ILECs are increasingly using integrated splitter/DSLAM equipment that does not require excessive cross-connects and tie cables. This coupled with the fact that some ILECs are allowing their affiliates to line share over the fiber DLC loops while denying CLECs this opportunity exacerbates the competitive disadvantage CLECs face.¹⁵⁰ CLECs need to be provided with a menu of configuration options for the splitter such that it matches the network efficiencies ILECs or their affiliates are able to utilize in the provision of advanced

Sharing Order at ¶ 79.

¹⁴⁶ *IL Line Sharing Order* at p. 10.

¹⁴⁷ For instance, Ameritech's proposed configuration would require CLECs to use three extra cross-connects and three extra tie cables. *Id.*

¹⁴⁸ *Id.*

¹⁴⁹ *Id.*

¹⁵⁰ *Id.* at 31.

services. Otherwise, CLECs will not be able to offer advanced services at parity with the ILEC or its affiliate given the increased costs effected by the inefficient splitter configuration and the possible loss of customers due to distance limitations.

D. Provisioning Intervals for Collocation Augments for Line Sharing

The Commission should establish a provisioning interval for splitter and cable augments of 30 days. In such a situation, CLECs are seeking the augmentation of an existing collocation site, not the construction of a new one. The augment required for the provisioning of line sharing is generally the connection of cables from the CLEC collocation arrangement to the ILEC mainframe or splitter location.¹⁵¹ The actual physical work involved includes only the running of one or several cables and should not take more than one or two days.¹⁵² This is in contrast to constructing a new site which is more complex since it requires space planning, power provided to the site and the installation of racks, shelves and relay racks.¹⁵³ There is no reason to subject collocation augments for line sharing to the longer interval utilized for constructing new sites.

State commissions have determined that thirty days is sufficient to provide the cable and splitter augments to facilitate line sharing.¹⁵⁴ Short provisioning intervals for cable and splitter

¹⁵¹ *PA ALJ Order* at p. 16.

¹⁵² *Id.*

¹⁵³ *Id.* at p. 16.

¹⁵⁴ *Id.* at p. 17. The Texas PUC has established a 30 day interval for cable augments. *See Texas Interim Order* at 25. The PA ALJ recommended a 30 day interval for cable and splitter augments for line sharing. The PA PUC increased the interval on an interim basis to 45 days but reaffirmed the principle that the time involved should be less than that associated with a new collocation site and stating that it may shorten the interval after a more developed record is produced. *Petition of Covad Communications Company for an Arbitration Award Against Bell Atlantic-Pennsylvania, Inc., Implementing the Line Sharing Unbundled Network Element; Petition of Rhythms Links, Inc., for an Expedited Arbitration Award Implementing Line Sharing*, Docket Nos. A-310696F0002 and A-

augmentations are especially vital when an ILEC refuses to own and manage the splitter capacity, because if the CLEC under-forecasts splitter capacity it will have to endure a 90 day interval to reinforce the capacity.¹⁵⁵ A shorter interval will ultimately benefit end users as they will be able to partake of xDSL service more quickly.

E. The Commission Should Require Incumbent LECs to Allow Line Splitting.

Finally, the Commission should adopt rules requiring incumbent LECs to provide line splitting. The Commission has made clear that the obligation to provide line *sharing* – which involves a data CLEC using the high frequency data portion of the line while the incumbent LEC provides voice service – does not preclude the right of CLEC to provide line *splitting* under which a CLEC(s) provide(s) both voice and data service over a single incumbent LEC loop.¹⁵⁶ The Commission's rules require incumbent LECs to provide requesting carriers with access to unbundled loops in a manner that allows the requesting carrier "to provide any telecommunications service that can be offered by means of that network element."¹⁵⁷

Accordingly, in its *Texas SBC Order*, the FCC stated that:

incumbent LECs have an obligation to permit competing carriers to engage in line splitting over the UNE-P where the competing carrier purchases the entire loop and provides its own splitter. The record reflects that SWBT allows competing carriers to provide both voice and data services over the UNE-P. For instance, if a competing carrier is providing voice service over the UNE-P, it can order an unbundled xDSL-capable loop terminated to a collocated splitter and DSLAM equipment and unbundled

310698F0002, Opinion and Order at p. 23 (PA PUC, August 17, 2000).

¹⁵⁵ *Id.* at p. 18.

¹⁵⁶ See *Application by SBC Communications Inc., et al. Pursuant to Section 271 of the Telecommunications Act to Provide In-Region, InterLATA Services In Texas*, Memorandum Opinion and Order, CC Docket No. 00-65 (June 30, 2000) ("*Texas SBC Order*").

¹⁵⁷ 47 C.F.R. § 51.307(c).

switching combined with shared transport to replace its UNE-P with a configuration that allows provisioning of both data and voice service. SWBT provides the loop that was part of the existing UNE-P as the unbundled xDSL-capable loop, unless the loop that was used for the UNE-P is not capable of providing xDSL service.¹⁵⁸

The Commission should make clear that this obligation extends to requiring the incumbent LEC to allow a voice customer to migrate its voice service to a line sharing data CLEC or a second CLEC, just as an incumbent LEC could do with its advanced services subsidiary.

¹⁵⁸ *Project Pronto* at ¶ 325 (citations omitted); In addition, a decision by the Although the New York Public Service Commission requiring line splitting has been reported in the trade press. However, a search of the Commission's web site indicates that the decision itself is not yet available. *See also* Arbitration Award in Texas Public Utility Commission Docket No. 22315, Petition of Southwestern Bell Telephone Company for Arbitration with AT&T Communications of Texas, L.P. TCG Dallas, and Teleport Communications, Inc. Texas Pursuant to Section 252(b)(1) of the Federal Communications Act of 1996, September 13, 2000, at 15-19; Application of the Attorney General of the State of Oklahoma, AT&T Communications of the Southwest, Inc., Brooks Fiber Communications of Tulsa, Inc., Cox Oklahoma Telcom, Inc., MCI Telecommunications Corporation, and Sprint Communications, L.P. to Explore Southwestern Bell Telephone Company's Compliance with Section 271(C) of the Telecommunications Act of 1996, Order Regarding Recommendation on 271 Application Pursuant to Telecommunications Act of 1996, September 28, 2000, at 181-182.

VII. THE COMMISSION SHOULD IMPLEMENT A NATIONAL SPACE RESERVATION POLICY FOR BOTH CENTRAL OFFICE AND REMOTE TERMINAL COLLOCATION.

A. The Need for a National Standard

The Commission clearly recognizes the value and importance of policies regarding the reservation of space in ILEC premises.¹⁵⁹ The Commission has recognized that ILECs have both “the incentive and capability to impede competition by reducing the amount of space available for collocation of competitors.”¹⁶⁰ Unchecked ILEC space reservation will limit the amount of available collocation space and inhibit the timely deployment of competitive services, particularly advanced services.¹⁶¹ Without policies limiting the time frame for reserving space, there is no check on how long ILECs may keep vital collocation space out of the reach of competitors. Pacific Bell, prior to the implementation of a space reservation policy by the California Public Utilities Commission, had an “unlimited” reservation policy for dissimilar equipment, *i.e.*, switching equipment, Main Distribution Frames, and power.¹⁶² SBC has previously argued that space reservation periods of 10 to 20 years would be appropriate for such equipment.¹⁶³ Thus, without space reservation policies chunks of valuable potential collocation space could be cordoned off from competitors for years regardless of the true need to reserve such space.¹⁶⁴

¹⁵⁹ This section will focus on ILEC space reservation. While CLECs also reserve space, the abuse of space reservation and the anti-competitive effects is more an issue in regard to ILEC space reservation since they exert control over the premises. Any policy that this Commission formulates that allows for ILECs to reserve space should provide the same opportunities to the CLECs to reserve space.

¹⁶⁰ *Collocation Remand NPRM* at ¶ 50, quoting *Advanced Services Report and Order*, 14 FCC Rcd at 4793, ¶ 56.

¹⁶¹ *Collocation Remand NPRM* at ¶ 50.

¹⁶² *Rulemaking on the Commission’s Own Motion to Govern Open Access to Bottleneck Services and Establish a Framework for Network Architecture Development of Dominant Networks*, Decision 98-12-069, 1998 WL 995609,

Recognizing this, the Commission “strongly” urged state commissions to adopt space reservation policies. The issue of space reservation cries out for a national standard, however. It is laudable that state commissions in California, Texas, and Washington have implemented such policies. These policies will help ensure that competitors have space to collocate their equipment such that residents of those states may partake of competitive advanced services. In states where such policies have not been implemented, however, ILECs will be able to thwart competition by reserving space indefinitely. A baseline national standard needs to be established such that disparities in the amount of time ILECs may restrict the availability of collocation space will not lead to “inconsistent deployment of advanced services” throughout the U.S.¹⁶⁵

B. A National Standard is Feasible

The Commission has heretofore declined to implement a national standard for space reservation because it felt that states, given their knowledge of local circumstances, were in a better position to determine whether a carrier has reserved more space than is necessary or is utilizing space reservation policies that is impeding physical collocation.¹⁶⁶ The determination

69 (Ca. PUC 1998). Dissimilar equipment is equipment that will be deployed by the ILEC in the ILEC premises that will not be deployed by the CLEC. Similar equipment is equipment that both the ILEC and CLEC will likely deploy in an ILEC premises, *e.g.*, multiplexers.

¹⁶³ *Collocation Remand NPRM* at ¶ 49, n. 131.

¹⁶⁴ The space that is reserved is fully vacant space, and does not cover space that the ILEC may be deeming to be occupied but in actuality is being used to “warehouse” inactive or underutilized equipment. The Washington Utilities and Transportation Commission deemed this “warehousing” practice to be a “de facto reservation of space for future use.” *Re MFS Communications Company, Inc.*, Docket Nos. UT-960323, UT-960326, UT-960337, 1998 WL 996190, 10 (WUTC 1998). Thus, usable space is already being foreclosed even before space is “reserved” by the ILEC.

¹⁶⁵ CC Docket No. 98-147, Reply to Oppositions to Sprint’s Petition for Partial Reconsideration and/or Clarification at p. 9 (July 27, 1999)(“*Sprint Reply*”).

¹⁶⁶ *Collocation Remand NPRM*, at ¶ 52.

of how long an ILEC should be allowed to reserve space is not one that requires a state-specific or CO-specific determination. Rather in determining what is an appropriate time for space reservation, one must determine what is the time period that best reflects, and balances, the need of ILECs to plan their networks, with that of CLECs need to collocate their equipment.

The Commission can determine a time frame that would reasonably allow for ILEC network planning and buildout that can apply in Michigan just as well as it would in Georgia. It is quite illuminative that three of the states that have implemented space reservation policies, California, Texas, and Washington, include two of the largest states in the United States (both in terms of area and population), and ones presumably with a large diversity of central office arrangements and space disputes. Yet, these states have implemented space reservation policies that apply in San Luis Obispo as well as Los Angeles; in Midland as well as Dallas. This is no way intended to mitigate the state PUCs' role in issues of space reservation. State PUCs would be the best entities to apply and police the space reservation policies; but the Commission should first establish and implement a national standard.

C. A Move from Space Reservation to Space Enhancement

The Commission needs to shift its focus from space reservation to space enhancement. Much of the underlying basis for space reservation plans has been undercut by technological advancements. The record in this proceeding will undeniably demonstrate that telecommunications equipment is becoming smaller and more integrated. For instance, switching, transport, and power equipment are all being integrated in multi-functional equipment that occupies a fraction of the space needed before. While ILECs argue that they need ten years to plan for the orderly growth and expansion of equipment such as main distribution frames and

switches and two years for equipment such as multiplexers and fiber optic terminals,¹⁶⁷ equipment is not expanding, it is contracting, and equipment such as switches and main distribution frames, that used to take up significant amounts of space, is becoming smaller or marginalized.¹⁶⁸ Project Pronto is a demonstration of how evolving technological equipment is becoming smaller and can be rapidly deployed.¹⁶⁹ As this Commission has recognized, remote terminals are becoming the central offices of today, with many of the essential telecommunications functions being moved out to such structures. The quick way in which SBC plans to deploy these remote terminals demonstrates that network planning and expansion requires less time than it did a few years ago.

Thus, there is simply no basis for the excessive time periods ILECs seek to reserve space. The fact that ILECs are continuing to insist on such excessive space reservation time frames demonstrates that ILECs are not basing these policies on the realities of the market, but on their desire to leverage their control of available collocation space. The Commission has taken a wonderful first step in recognizing the way in which ILEC space reservation plans can impede competition and the need for the policies to check such plans. The Commission needs to take the next step and implement a national, uniform policy that will limit these space reservation plans. Joint Commenters propose that a period of a year would be sufficient to give carriers an opportunity to engage in network planning. In the evolving telecommunications market, any

¹⁶⁷ *Sprint Reply* at p. 7.

¹⁶⁸ For instance, SBC's Project Pronto architecture utilizes integrated DLC technology that bypasses the main distribution frame altogether. *IL Line Sharing Order* at p. 11.

¹⁶⁹ As part of its Project Pronto, SBC will "install or upgrade approximately 25,000 neighborhood broadband gateways containing next-generation digital loop carriers." SBC Communications, Inc., *Project Pronto: SBC's Network Vision and Strategy* (November 1999).

period longer than a year is not needed and will exclude valuable space that can be used in ILEC premises.¹⁷⁰

In addition, the Commission's focus needs to shift from allowing ILECs to reserve space to encouraging ILECs to utilize configurations and equipment that will enhance available space and allow for more carriers to be able to collocate. Rather than allowing ILECs to have the ability to reserve space for indefinite periods, policies should be implemented that will place on ILECs an affirmative obligation to ensure space is available both in the central office and remote terminals. Technology is providing ways to address the space limitation issues that have inhibited the development of competition to date. These developments should not be undercut by ILEC practices that will limit space in the future.

A classic example of this is how SBC has committed to making more collocation space available in remote terminals it deploys after September 15, 2000.¹⁷¹ This shows that ILECs do have capabilities to plan their networks not only to meet their needs, but to provide for space to effectuate non-discriminatory access to their premises. It also suggests that up to this point, SBC was not providing for such space in its remote terminals given the lack of collocation space at the existing terminals. The Commission needs to implement policies that transforms the focus of network planning from unnecessarily reserving existing space in premises to encouraging the provision of more space in these premises. The focus has to switch from space reservation to space enhancement.

¹⁷⁰ The time frame should not be equipment-specific, *i.e.*, the similar/dissimilar distinction should be eliminated. Technology is integrating equipment and blurring old definitional lines. There is no need for a longer time frame for equipment such as switches.

¹⁷¹ *Project Pronto Order* at ¶ 34.

CONCLUSION

Joint Commenters respectfully request that the Commission reinstitute collocation regulations in accordance with the forgoing comments.

Respectfully submitted,

Eric Branfman
Kevin Hawley
Swidler Berlin Shereff Friedman, LLP
3000 K Street, N.W.
Suite 300
Washington, D.C. 20007
(202) 424-7500

Counsel for **Joint Commenters**
CoreComm, Inc., Vits Networks, Inc.
and Logix, Inc.

Dated: October 12, 2000